```
=> file caplus
FILE 'CAPLUS' ENTERED AT 18:06:37 ON 01 MAY 2002
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Point of Contact:
Thomas G. Larson, Ph.D.
703-308-7309
CM1, Rm. 6 B 01

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FILE COVERS 1907 - 1 May 2002  VOL 136 ISS 18
FILE LAST UPDATED: 30 Apr 2002  (20020430/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.

CAS roles have been modified effective December 16, 2001. Please
check your SDI profiles to see if they need to be revised. For
information on CAS roles, enter HELP ROLES at an arrow prompt or use
the CAS Roles thesaurus (/RL field) in this file.

=> D QUE L6
L1            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FORMOTEROL/CN
L2          309 SEA FILE=CAPLUS ABB=ON  PLU=ON  L1
L3          309 SEA FILE=CAPLUS ABB=ON  PLU=ON  73573-87-2##/RN
L4          309 SEA FILE=CAPLUS ABB=ON  PLU=ON  L2 OR L3
L5          273 SEA FILE=CAPLUS ABB=ON  PLU=ON  "DRUG DELIVERY SYSTEMS (L)
                AEROSOLS, INHALANTS"+OLD/CT
L6            9 SEA FILE=CAPLUS ABB=ON  PLU=ON  L4 AND L5


=> D QUE L13
L1            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  FORMOTEROL/CN
L2          309 SEA FILE=CAPLUS ABB=ON  PLU=ON  L1
L3          309 SEA FILE=CAPLUS ABB=ON  PLU=ON  73573-87-2##/RN
L4          309 SEA FILE=CAPLUS ABB=ON  PLU=ON  L2 OR L3
L9            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  WATER/CN
L10      246370 SEA FILE=CAPLUS ABB=ON  PLU=ON  L9
L12      246370 SEA FILE=CAPLUS ABB=ON  PLU=ON  L9 OR L10
L13           1 SEA FILE=CAPLUS ABB=ON  PLU=ON  L4 AND L12


=> D QUE L16
L14         405 SEA FILE=CAPLUS ABB=ON  PLU=ON  FORMOTEROL OR AFORMOTEROL OR
                EFORMOTEROL  OR FORMADIL
L15     2639836 SEA FILE=CAPLUS ABB=ON  PLU=ON  AQUEOUS OR WATER
L16           0 SEA FILE=CAPLUS ABB=ON  PLU=ON  L14 (3A) L15


=> D QUE L17
L14         405 SEA FILE=CAPLUS ABB=ON  PLU=ON  FORMOTEROL OR AFORMOTEROL OR
                EFORMOTEROL  OR FORMADIL
L15     2639836 SEA FILE=CAPLUS ABB=ON  PLU=ON  AQUEOUS OR WATER
```

```
L17           2 SEA FILE=CAPLUS ABB=ON  PLU=ON  L14 (5A) L15


=> S L6 OR L13 OR L17
L94          11 L6 OR L13 OR L17

=> FILE MEDLINE
FILE 'MEDLINE' ENTERED AT 18:07:41 ON 01 MAY 2002

 FILE LAST UPDATED: 1 MAY 2002 (20020501/UP). FILE COVERS 1958 TO DATE.

 On April 22, 2001, MEDLINE was reloaded.  See HELP RLOAD for details.

 MEDLINE now contains IN-PROCESS records.  See HELP CONTENT for details.

 MEDLINE is now updated 4 times per week.  A new current-awareness alert
 frequency (EVERYUPDATE) is available.  See HELP UPDATE for more information.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2001 vocabulary.  Enter HELP THESAURUS for details.

 The OLDMEDLINE file segment now contains data from 1958 through 1965.
 Enter HELP CONTENT for details.

 Left, right, and simultaneous left and right truncation are available in the
 Basic Index.  See HELP SFIELDS for details.

 THIS FILE CONTAINS CAS REGISTRY NUMBERS FOR EASY AND ACCURATE
 SUBSTANCE IDENTIFICATION.

=> D QUE L33
L18          409 SEA FILE=MEDLINE ABB=ON  PLU=ON  FORMOTEROL OR AFORMOTEROL OR
                 EFORMOTEROL  OR FORMADIL
L19          336 SEA FILE=MEDLINE ABB=ON  PLU=ON  73573-87-2
L20          409 SEA FILE=MEDLINE ABB=ON  PLU=ON  L18 OR L19
L21        16146 SEA FILE=MEDLINE ABB=ON  PLU=ON  AEROSOLS/CT
L23           20 SEA FILE=MEDLINE ABB=ON  PLU=ON  L20 AND L21
L24         3909 SEA FILE=MEDLINE ABB=ON  PLU=ON  NEBULIZERS AND VAPORIZERS/CT
L33            4 SEA FILE=MEDLINE ABB=ON  PLU=ON  L23 AND L24


=> D QUE L35
L19          336 SEA FILE=MEDLINE ABB=ON  PLU=ON  73573-87-2
L30        41374 SEA FILE=MEDLINE ABB=ON  PLU=ON  7732-18-5##
L35            0 SEA FILE=MEDLINE ABB=ON  PLU=ON  L19 AND L30


=> D QUE L40
L18          409 SEA FILE=MEDLINE ABB=ON  PLU=ON  FORMOTEROL OR AFORMOTEROL OR
                 EFORMOTEROL  OR FORMADIL
L19          336 SEA FILE=MEDLINE ABB=ON  PLU=ON  73573-87-2
L20          409 SEA FILE=MEDLINE ABB=ON  PLU=ON  L18 OR L19
L21        16146 SEA FILE=MEDLINE ABB=ON  PLU=ON  AEROSOLS/CT
L39         2590 SEA FILE=MEDLINE ABB=ON  PLU=ON  L21/MAJ
L40            0 SEA FILE=MEDLINE ABB=ON  PLU=ON  L20 AND L39


=> D QUE L42
L18          409 SEA FILE=MEDLINE ABB=ON  PLU=ON  FORMOTEROL OR AFORMOTEROL OR
                 EFORMOTEROL  OR FORMADIL
```

```
L19          336 SEA FILE=MEDLINE ABB=ON  PLU=ON  73573-87-2
L20          409 SEA FILE=MEDLINE ABB=ON  PLU=ON  L18 OR L19
L22        11508 SEA FILE=MEDLINE ABB=ON  PLU=ON  ADMINISTRATION, INHALATION/CT

L41          143 SEA FILE=MEDLINE ABB=ON  PLU=ON  L22/MAJ
L42            0 SEA FILE=MEDLINE ABB=ON  PLU=ON  L41 AND L20


=> D QUE L44
L18          409 SEA FILE=MEDLINE ABB=ON  PLU=ON  FORMOTEROL OR AFORMOTEROL OR
                 EFORMOTEROL  OR FORMADIL
L19          336 SEA FILE=MEDLINE ABB=ON  PLU=ON  73573-87-2
L20          409 SEA FILE=MEDLINE ABB=ON  PLU=ON  L18 OR L19
L24         3909 SEA FILE=MEDLINE ABB=ON  PLU=ON  NEBULIZERS AND VAPORIZERS/CT
L43         1971 SEA FILE=MEDLINE ABB=ON  PLU=ON  L24/MAJ
L44            8 SEA FILE=MEDLINE ABB=ON  PLU=ON  L20 AND L43


=> D QUE L48
L45          409 SEA FILE=MEDLINE ABB=ON  PLU=ON  FORMOTEROL OR AFORMOTEROL OR
                 EFORMOTEROL  OR FORMADIL
L46       282134 SEA FILE=MEDLINE ABB=ON  PLU=ON  AQUEOUS OR WATER
L48            1 SEA FILE=MEDLINE ABB=ON  PLU=ON  L45 (5A) L46


=> S L33 OR L44 OR L48
L95           10 L33 OR L44 OR L48

=> FILE EMBASE
FILE 'EMBASE' ENTERED AT 18:09:13 ON 01 MAY 2002
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 FILE COVERS 1974 TO 25 Apr 2002 (20020425/ED)

 EMBASE has been reloaded. Enter HELP RLOAD for details.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> D QUE L54
L49         1043 SEA FILE=EMBASE ABB=ON  PLU=ON  FORMOTEROL OR AFORMOTEROL OR
                 EFORMOTEROL  OR FORMADIL
L50          946 SEA FILE=EMBASE ABB=ON  PLU=ON  73573-87-2
L51         1043 SEA FILE=EMBASE ABB=ON  PLU=ON  L49 OR L50
L52          246 SEA FILE=EMBASE ABB=ON  PLU=ON  L51 AND IH/CT
L53         1656 SEA FILE=EMBASE ABB=ON  PLU=ON  NEBULIZATION/CT
L54            5 SEA FILE=EMBASE ABB=ON  PLU=ON  L52 AND L53


=> D QUE L59
L49         1043 SEA FILE=EMBASE ABB=ON  PLU=ON  FORMOTEROL OR AFORMOTEROL OR
                 EFORMOTEROL  OR FORMADIL
L50          946 SEA FILE=EMBASE ABB=ON  PLU=ON  73573-87-2
L51         1043 SEA FILE=EMBASE ABB=ON  PLU=ON  L49 OR L50
L52          246 SEA FILE=EMBASE ABB=ON  PLU=ON  L51 AND IH/CT
L53         1656 SEA FILE=EMBASE ABB=ON  PLU=ON  NEBULIZATION/CT
L55        15781 SEA FILE=EMBASE ABB=ON  PLU=ON  AEROSOL/CT
L57           19 SEA FILE=EMBASE ABB=ON  PLU=ON  L55 AND L52
L59            2 SEA FILE=EMBASE ABB=ON  PLU=ON  L57 AND L53
```

```
=> D QUE L63
L49        1043 SEA FILE=EMBASE ABB=ON  PLU=ON  FORMOTEROL OR AFORMOTEROL OR
                EFORMOTEROL  OR FORMADIL
L62      304738 SEA FILE=EMBASE ABB=ON  PLU=ON  WATER OR AQUEOUS
L63           0 SEA FILE=EMBASE ABB=ON  PLU=ON  L49 (5A) L62


=> D QUE L65
L53        1656 SEA FILE=EMBASE ABB=ON  PLU=ON  NEBULIZATION/CT
L60         946 SEA FILE=EMBASE ABB=ON  PLU=ON  FORMOTEROL/CT
L64         412 SEA FILE=EMBASE ABB=ON  PLU=ON  L60/MAJ
L65           0 SEA FILE=EMBASE ABB=ON  PLU=ON  L64 AND L53


=> D QUE L69
L55       15781 SEA FILE=EMBASE ABB=ON  PLU=ON  AEROSOL/CT
L60         946 SEA FILE=EMBASE ABB=ON  PLU=ON  FORMOTEROL/CT
L64         412 SEA FILE=EMBASE ABB=ON  PLU=ON  L60/MAJ
L68          19 SEA FILE=EMBASE ABB=ON  PLU=ON  L64 AND L55
L69           4 SEA FILE=EMBASE ABB=ON  PLU=ON  L68 AND IH/CT


=> D QUE L72
L19         336 SEA FILE=MEDLINE ABB=ON  PLU=ON  73573-87-2
L71       24661 SEA FILE=EMBASE ABB=ON  PLU=ON  7732-18-5##
L72           1 SEA FILE=EMBASE ABB=ON  PLU=ON  L19 AND L71


=> S L54 OR L59 OR L69 OR L72
L96          10 L54 OR L59 OR L69 OR L72

=> FILE DRUGU
FILE 'DRUGU' ENTERED AT 18:10:31 ON 01 MAY 2002
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FILE LAST UPDATED: 26 APR 2002      <20020426/UP>
>>>  DERWENT DRUG FILE (SUBSCRIBER)  <<<

>>>  SDI'S MAY BE RUN WEEKLY OR MONTHLY AS OF JUNE 2001.  <<<
>>>  (WEEKLY IS THE DEFAULT). FOR PRICING INFORMATION     <<<
>>>  SEE HELP COST                                        <<<

>>>  FILE COVERS 1983 TO DATE  <<<
>>>  THESAURUS AVAILABLE IN /CT  <<<


=> D QUE L81
L73          737 SEA FILE=DRUGU ABB=ON  PLU=ON  FORMOTEROL OR AFORMOTEROL OR
                EFORMOTEROL  OR FORMADIL
L81            0 SEA FILE=DRUGU ABB=ON  PLU=ON  L73 (3A) (AQUEOUS OR WATER)


=> D QUE L82
L73          737 SEA FILE=DRUGU ABB=ON  PLU=ON  FORMOTEROL OR AFORMOTEROL OR
                EFORMOTEROL  OR FORMADIL
L82            1 SEA FILE=DRUGU ABB=ON  PLU=ON  L73 (5A) (AQUEOUS OR WATER)


=> D QUE L83
```

make Formoterol major focus of document.

IH = Inhalation delivery

```
L73          737 SEA FILE=DRUGU ABB=ON  PLU=ON  FORMOTEROL OR AFORMOTEROL OR
                 EFORMOTEROL  OR FORMADIL
L74          457 SEA FILE=DRUGU ABB=ON  PLU=ON  73573-87-2
L75          737 SEA FILE=DRUGU ABB=ON  PLU=ON  L73 OR L74
L79        42824 SEA FILE=DRUGU ABB=ON  PLU=ON  WATER OR 7732-18-5
L80           12 SEA FILE=DRUGU ABB=ON  PLU=ON  L75 AND L79
L83           11 SEA FILE=DRUGU ABB=ON  PLU=ON  L80 AND 33/CC
```

33 is "respiratory" section code

```
=> S L82 OR L83
L97           12 L82 OR L83

=> FILE WPIDS
FILE 'WPIDS' ENTERED AT 18:11:31 ON 01 MAY 2002
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FILE LAST UPDATED: 29 APR 2002              <20020429/UP>
MOST RECENT DERWENT UPDATE           200227   <200227/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> The BATCH option for structure searches has been
    enabled in WPINDEX/WPIDS and WPIX  >>>

>>> PATENT IMAGES AVAILABLE FOR PRINT AND DISPLAY >>>

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES,
    SEE http://www.derwent.com/dwpi/updates/dwpicov/index.html <<<

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX TOOLS OF THE
    TRADE USER GUIDE, PLEASE VISIT:
    http://www.derwent.com/data/stn3.pdf <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER
    GUIDES, PLEASE VISIT:
    http://www.derwent.com/userguides/dwpi_guide.html <<<

=> D QUE L87
L84          110 SEA FILE=WPIDS ABB=ON  PLU=ON  FORMOTEROL OR AFORMOTEROL OR
                 EFORMOTEROL  OR FORMADIL
L85      1246207 SEA FILE=WPIDS ABB=ON  PLU=ON  WATER OR AQUEOUS
L87            1 SEA FILE=WPIDS ABB=ON  PLU=ON  L84 (5A) L85


=> D QUE L90
L84          110 SEA FILE=WPIDS ABB=ON  PLU=ON  FORMOTEROL OR AFORMOTEROL OR
                 EFORMOTEROL  OR FORMADIL
L85      1246207 SEA FILE=WPIDS ABB=ON  PLU=ON  WATER OR AQUEOUS
L88        18208 SEA FILE=WPIDS ABB=ON  PLU=ON  AEROSOL?
L89           25 SEA FILE=WPIDS ABB=ON  PLU=ON  L84 AND L88
L90            7 SEA FILE=WPIDS ABB=ON  PLU=ON  L89 AND L85


=> D QUE L93
L84          110 SEA FILE=WPIDS ABB=ON  PLU=ON  FORMOTEROL OR AFORMOTEROL OR
                 EFORMOTEROL  OR FORMADIL
L85      1246207 SEA FILE=WPIDS ABB=ON  PLU=ON  WATER OR AQUEOUS
L91         1121 SEA FILE=WPIDS ABB=ON  PLU=ON  NEBULIZ? OR NEBULIS?
L92            9 SEA FILE=WPIDS ABB=ON  PLU=ON  L84 AND L91
L93            7 SEA FILE=WPIDS ABB=ON  PLU=ON  L92 AND L85
```

```
=> S L87 OR L90 OR L93
L98          9 L87 OR L90 OR L93

=> FILE STNGUIDE
FILE 'STNGUIDE' ENTERED AT 18:12:33 ON 01 MAY 2002
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AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Apr 26, 2002 (20020426/UP).

=> DUP REM L95 L97 L94 L96 L98
FILE 'MEDLINE' ENTERED AT 18:14:41 ON 01 MAY 2002

FILE 'DRUGU' ENTERED AT 18:14:41 ON 01 MAY 2002
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FILE 'CAPLUS' ENTERED AT 18:14:41 ON 01 MAY 2002
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FILE 'WPIDS' ENTERED AT 18:14:41 ON 01 MAY 2002
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PROCESSING COMPLETED FOR L95
PROCESSING COMPLETED FOR L97
PROCESSING COMPLETED FOR L94
PROCESSING COMPLETED FOR L96
PROCESSING COMPLETED FOR L98
L99          48 DUP REM L95 L97 L94 L96 L98 (4 DUPLICATES REMOVED)

=> D IBIB AB CT 1-48

L99  ANSWER 1 OF 48  CAPLUS  COPYRIGHT 2002 ACS
ACCESSION NUMBER:         2002:122774  CAPLUS
DOCUMENT NUMBER:          136:172782
TITLE:                    Formulations of mometasone and a bronchodilator for
                          pulmonary administration
INVENTOR(S):              Kaplan, Leonard W.; Weinrich, Karl P.; Iorio, Theodore
                          L.
PATENT ASSIGNEE(S):       Longwood Pharmaceutical Research, Inc., USA
SOURCE:                   PCT Int. Appl., 37 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
     WO 2002011711      A2   20020214       WO 2001-US24093  20010801
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
```

RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ,
VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-223541P P 20000804

AB A pharmaceutical formulation is provided for pulmonary drug administration of a bronchodilator, a corticosteroid and an optional pharmaceutically acceptable carrier. The bronchodilator has agonist activity for .beta.2-adrenergic receptors. In addn., methods for using the formulation to treat bronchodilator/corticosteroid-responsive conditions, diseases or disorders are provided, as are drug delivery devices and dosage forms for housing and/or dispensing the formulations. For example, pirbuterol acetate 10.0 mg, mometasone furoate 10.0 mg, and lactose 2000 mg were blended using conventional blending techniques to form a dry powder. Particle size redn. was not required as each of the components is obtained having a suitable particle size. The dry powder was then divided, in equal portions, into 100 capsules each contg. 100 .mu.g of pirbuterol acetate and 100 .mu.g of mometasone furoate.

CT **Drug delivery systems**
CT Drug delivery systems
CT Hydrocarbons, biological studies
CT Antiasthmatics
CT Bronchodilators
CT Lung, disease
CT Propellants (sprays and foams)
CT Corticosteroids, biological studies
CT Hydrocarbons, biological studies
CT Perfluorocarbons
CT Hydrocarbons, biological studies
CT Drug delivery systems
CT Medical goods
CT Drug delivery systems
CT Drug delivery systems
CT Drug delivery systems
CT Adrenoceptor agonists

L99 ANSWER 2 OF 48 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:51237 CAPLUS
DOCUMENT NUMBER: 136:123631
TITLE: Aerosol formulation containing a polar fluorinated compound
INVENTOR(S): Rogueda, Philippe
PATENT ASSIGNEE(S): Astrazeneca AB, Swed.
SOURCE: PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002003958	A1	20020117	WO 2001-SE1606	20010710

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US,
UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: GB 2000-16876 A 20000711

AB The present invention relates to a stable pharmaceutical aerosol formulation intended for inhalation. The formulation contains an active substance, an aerosol propellant, a polar fluorinated mol. and an excipient. The preferred propellant is HFA 134a or HFA 227 or a mixt. Thus, an aerosol formulation contained budesonide 0.125, methoxy-PEG-DSPE 0.320, 1H,1H,2H,2H-perfluorooctan-1-ol 31.7 and HFA-227 to 100%.

CT Polyoxyalkylenes, biological studies
CT Allergy inhibitors
CT Analgesics
CT Anti-inflammatory agents
CT Antiasthmatics
CT Antibiotics
CT Antihistamines
CT Antitumor agents
CT Bronchodilators
CT Cardiovascular agents
CT Cholinergic antagonists
CT Imaging agents
CT Leukotriene antagonists
CT Lung
CT Propellants (sprays and foams)
CT Pulmonary surfactant
CT Tuberculostatics
CT Virus vectors
CT Metals, uses
CT Carbohydrates, biological studies
CT Castor oil
CT Enzymes, biological studies
CT Fatty acids, biological studies
CT Fluoropolymers, biological studies
CT Peptides, biological studies
CT Perfluoro compounds
CT Perfluorocarbons
CT Phospholipids, biological studies
CT Polyoxyalkylenes, biological studies
CT Polyoxyalkylenes, biological studies
CT Proteins
CT Steroids, biological studies
CT **Drug delivery systems**
CT Drug delivery systems
CT Glycosides
CT Polyoxyalkylenes, biological studies
CT Lung, disease
CT Fatty acids, biological studies
CT Polyesters, biological studies
CT Alkanes, biological studies
CT Mast cell
CT Drug delivery systems
CT Polyoxyalkylenes, biological studies
CT Polyesters, biological studies
CT Nose

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L99 ANSWER 3 OF 48 WPIDS (C) 2002 THOMSON DERWENT

ACCESSION NUMBER: 2002-164809 [21] WPIDS

DOC. NO. CPI: C2002-050997
TITLE: Medicinal **aerosol** formulation used for pressurized drug delivery for treating e.g. asthma comprises particulate medicament, propellant and stabilizer comprising **water** addition.
DERWENT CLASS: B05 B07
INVENTOR(S): ADJEI, A L; CUTIE, A J
PATENT ASSIGNEE(S): (AERO-N) AEROPHARM TECHNOLOGY INC
COUNTRY COUNT: 93
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2002007672	A2	20020131	(200221)*	EN	18

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2002007672	A2	WO 2000-US42625	20001207

PRIORITY APPLN. INFO: US 2000-619183 20000719
AB WO 200207672 A UPAB: 20020403
NOVELTY - Medicinal **aerosol** formulation (I) comprises:
(a) at particulate medicament or combination of at least two medicaments;
(b) propellant, and
(c) stabilizer comprising **water** addition in an amount which is in addition to nascent formulation **water**.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:
(1) preparation of (I), and
(2) a metered dose inhaler containing (I).
ACTIVITY - Antiallergic; Antiinflammatory; Antidiabetic; Antianginal; Antibacterial.
MECHANISM OF ACTION - None given in the source material.
USE - Used for pressurized drug delivery to effect bronchodilation for treating asthma, chronic obstructive pulmonary disease, allergic rhinitis, rhinitis, diabetes, angina and local infection.
ADVANTAGE - The stabilizer prevents settling, creaming or flocculation of (I).
Dwg.0/0

L99 ANSWER 4 OF 48 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:146364 CAPLUS
TITLE: Electrochemical behavior of formoterol fumarate and its determination in capsules for inhalation and human serum using differential-pulse and square-wave voltammetry
AUTHOR(S): Demircigil, B. T.; Ozkan, S. A.; Coruh, O.; Yilmaz, S.
CORPORATE SOURCE: Faculty of Pharmacy, Department of Analytical Chemistry, Gazi University, Ankara, 06330, Turk.
SOURCE: Electroanalysis (2002), 14(2), 122-127

CODEN: ELANEU; ISSN: 1040-0397
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The electrochem. oxidn. of formoterol fumarate (**formoterol**) has been carried out in **aq**. soln. in the pH range of 1.5-10.0 by cyclic, linear sweep, differential-pulse and square-wave voltammetry. The diffusion controlled nature of the waves was established. The mechanism of oxidn. was discussed. Two voltammetric techniques for the detn. of formoterol in 0.5 M sulfuric acid which allow quantitation over the 8 .times. 10-6-6 .times. 10-5 M range for both methods were proposed. Based on this study simple, rapid and selective two voltammetric methods were developed for the detn. of formoterol in capsule dosage form and human serum.
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L99 ANSWER 5 OF 48 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2002079718 EMBASE
TITLE: [System of inhalation in asthma therapy].
LES SYSTEMES D'INHALATION DANS LE TRAITEMENT DE L'ASTHME.
AUTHOR: Dubus J.C.; Andrieu V.; Reynier J.P.
CORPORATE SOURCE: J.C. Dubus, Unite de Medecine Infantile, CHU Timone-Enfants, 13385 Marseille Cedex 5, France. jdubus@mail.ap-hm.fr
SOURCE: Revue des Maladies Respiratoires, (2002) 19/1 (90-92).
Refs: 5
ISSN: 0761-8425 CODEN: RMREEY
COUNTRY: France
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 015 Chest Diseases, Thoracic Surgery and Tuberculosis
027 Biophysics, Bioengineering and Medical Instrumentation
037 Drug Literature Index
LANGUAGE: French
CT Medical Descriptors:
*asthma: DT, drug therapy
aerosol
inhaler
nebulization
metered dose inhaler
human
article
Drug Descriptors:
salbutamol sulfate: DT, drug therapy
salbutamol sulfate: IH, inhalational drug administration
salbutamol: DT, drug therapy
salbutamol: IH, inhalational drug administration
fluticasone propionate: DT, drug therapy
fluticasone propionate: IH, inhalational drug administration
beclometasone dipropionate: DT, drug therapy
beclometasone dipropionate: IH, inhalational drug administration
pirbuterol acetate: DT, drug therapy
pirbuterol acetate: IH, inhalational drug administration
salmeterol xinafoate: DT, drug therapy
salmeterol xinafoate: IH, inhalational drug administration
fluticasone propionate plus salmeterol: DT, drug therapy
fluticasone propionate plus salmeterol: IH, inhalational drug administration
terbutaline: DT, drug therapy

terbutaline: IH, inhalational drug administration
budesonide: DT, drug therapy
budesonide: IH, inhalational drug administration
budesonide plus formoterol: DT, drug therapy
budesonide plus formoterol: IH, inhalational drug administration
beclometasone: DT, drug therapy
beclometasone: IH, inhalational drug administration
formoterol: DT, drug therapy
formoterol: IH, inhalational drug administration
cromoglycate disodium: DT, drug therapy
cromoglycate disodium: IH, inhalational drug administration
flunisolide: DT, drug therapy
flunisolide: IH, inhalational drug administration
prolair
formoterol fumarate
asthmasal
asthmabec
bemedrex

L99 ANSWER 6 OF 48 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2002035497 EMBASE
TITLE: Chronic obstructive pulmonary disease: The GOLD initiative.
AUTHOR: Leuenberger P.; Rochat T.
CORPORATE SOURCE: Prof. P. Leuenberger, Division de Pneumologie, CHUV, 1011 Lausanne, Switzerland. philippe.leuenberger@chuv.hospvd.ch
SOURCE: Medecine et Hygiene, (9 Jan 2002) 60/2374 (54-62).
Refs: 42
ISSN: 0025-6749 CODEN: MEHGAB
COUNTRY: Switzerland
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 006 Internal Medicine
015 Chest Diseases, Thoracic Surgery and Tuberculosis
030 Pharmacology
037 Drug Literature Index
038 Adverse Reactions Titles
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Chronic obstructive pulmonary disease (COPD) is the object of a large campaign of information and action among health professionals under the acronym .mchlt.GOLD.mchgt. (Global initiative for Obstructive Lung Disease). Tobacco smoke exposure is the main risk factor and tobacco cessation is the most effective means to stop progression of the disease. Pharmacological treatment is aimed at preventing and controlling the symptoms and is based predominantly on the administration of bronchodilators. The impact of inhaled corticosteroids on inflammation in COPD is limited. Considering its significant side effects, maintenance treatment with oral or intramuscular corticosteroids should be avoided. Patient education and respiratory rehabilitation are important in the management of patients with COPD. Long term oxygenotherapy prolongs survival in the most severe patients. Chest surgery and lung transplantation are to be restricted to carefully selected candidates.
CT Medical Descriptors:
*chronic obstructive lung disease: DT, drug therapy
*chronic obstructive lung disease: ET, etiology
*chronic obstructive lung disease: PC, prevention
*chronic obstructive lung disease: RH, rehabilitation
*chronic obstructive lung disease: SU, surgery
health program
medical information
smoking

exposure
risk factor
smoking cessation
disease course
symptomatology
drug efficacy
corticosteroid therapy
side effect: SI, side effect
maintenance therapy
patient education
long term care
oxygen therapy
survival
disease severity
thorax surgery
lung transplantation
treatment indication
aerosol
powder
nebulization
assisted ventilation
human
controlled study
article
Drug Descriptors:
tobacco smoke
bronchodilating agent: DT, drug therapy
bronchodilating agent: PR, pharmaceutics
bronchodilating agent: PD, pharmacology
bronchodilating agent: IH, inhalational drug administration
corticosteroid: AE, adverse drug reaction
corticosteroid: DT, drug therapy
corticosteroid: PD, pharmacology
corticosteroid: IH, inhalational drug administration
corticosteroid: IM, intramuscular drug administration
corticosteroid: PO, oral drug administration
oxygen: DT, drug therapy
oxygen: IH, inhalational drug administration
beta 2 adrenergic receptor stimulating agent: DT, drug therapy
beta 2 adrenergic receptor stimulating agent: PD, pharmacology
salbutamol: DT, drug therapy
salbutamol: PR, pharmaceutics
salbutamol: PD, pharmacology
salbutamol: IH, inhalational drug administration
terbutaline: DT, drug therapy
terbutaline: PR, pharmaceutics
terbutaline: PD, pharmacology
terbutaline: IH, inhalational drug administration
fenoterol: DT, drug therapy
fenoterol: PR, pharmaceutics
fenoterol: PD, pharmacology
fenoterol: IH, inhalational drug administration
salmeterol xinafoate: DT, drug therapy
salmeterol xinafoate: PR, pharmaceutics
salmeterol xinafoate: PD, pharmacology
salmeterol xinafoate: IH, inhalational drug administration
formoterol fumarate: DT, drug therapy
formoterol fumarate: PR, pharmaceutics
formoterol fumarate: PD, pharmacology
formoterol fumarate: IH, inhalational drug administration

cholinergic receptor blocking agent: DT, drug therapy
cholinergic receptor blocking agent: PR, pharmaceutics
cholinergic receptor blocking agent: PD, pharmacology
cholinergic receptor blocking agent: IH, inhalational drug administration
ipratropium bromide: DT, drug therapy
ipratropium bromide: PR, pharmaceutics
ipratropium bromide: PD, pharmacology
ipratropium bromide: IH, inhalational drug administration
methylxanthine: DT, drug therapy
methylxanthine: PR, pharmaceutics
methylxanthine: PD, pharmacology
methylxanthine: IH, inhalational drug administration
aminophylline: DT, drug therapy
aminophylline: PR, pharmaceutics
aminophylline: PD, pharmacology
aminophylline: IH, inhalational drug administration
theophylline: DT, drug therapy
theophylline: PR, pharmaceutics
theophylline: PD, pharmacology
theophylline: IH, inhalational drug administration
glucocorticoid: DT, drug therapy
antibiotic agent: DT, drug therapy
Pneumococcus vaccine: DT, drug therapy
alpha 1 antitrypsin: DT, drug therapy
antioxidant: DT, drug therapy
immunomodulating agent: DT, drug therapy
antitussive agent: DT, drug therapy
ambroxol: DT, drug therapy
erdosteine: DT, drug therapy
carbocisteine: DT, drug therapy
salbutamol sulfate: DT, drug therapy
salbutamol sulfate: PR, pharmaceutics
salbutamol sulfate: PD, pharmacology
salbutamol sulfate: IH, inhalational drug administration
formoterol: DT, drug therapy
formoterol: PD, pharmacology
formoterol: IH, inhalational drug administration

L99 ANSWER 7 OF 48 MEDLINE
ACCESSION NUMBER: 2001435200 MEDLINE
DOCUMENT NUMBER: 21191314 PubMed ID: 11296600
TITLE: Long-acting asthma medication, new inhaler approved by FDA.
AUTHOR: Thompson C A
SOURCE: AMERICAN JOURNAL OF HEALTH-SYSTEM PHARMACY, (2001 Apr 1) 58 (7) 557-8.
Journal code: CBH; 9503023. ISSN: 1079-2082.
PUB. COUNTRY: United States
News Announcement
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200108
ENTRY DATE: Entered STN: 20010806
Last Updated on STN: 20010806
Entered Medline: 20010802
CT Check Tags: Human
*Bronchodilator Agents: AD, administration & dosage
*Bronchodilator Agents: TU, therapeutic use
Clinical Trials
Device Approval

Drug Approval
*Ethanolamines: AD, administration & dosage
*Ethanolamines: TU, therapeutic use
***Nebulizers and Vaporizers**
United States
United States Food and Drug Administration

L99 ANSWER 8 OF 48 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:564809 CAPLUS
DOCUMENT NUMBER: 135:142240
TITLE: A method of administering a medicinal aerosol formulation
INVENTOR(S): Adjei, Akwete L.; Stefanos, Simon; Zhu, Yaping
PATENT ASSIGNEE(S): Aeropharm Technology, Inc., USA
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001054664	A1	20010802	WO 2001-US116	20010102

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-177982P P 20000125
US 2000-702194 A 20001030

AB A method of treating in a human or animal a condition capable of treatment by oral or nasal inhalation has been found. The method comprises administering a medicinal aerosol formulation comprising a selected medicament under conditions where the amt. of the selected drug delivered to the site of action, e.g. the lungs, is maximized. After intrapulmonary and i.v. administration of 7.5, and 5.0 .mu.g/kg amylin, resp., to rabbits the half life of the drug in the body was 26.38 and 17.17 min, resp.

CT Immunoglobulins
CT Immunoglobulins
CT Immunoglobulins
CT Immunoglobulins
CT Immunoglobulins
CT **Drug delivery systems**
CT Antibiotics
CT Antidiabetic agents
CT Albumins, biological studies
CT Cytokines
CT Interferons
CT Interleukins
CT Ovalbumin
CT Peptides, biological studies
CT Proteins, general, biological studies
CT Drug delivery systems

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L99 ANSWER 9 OF 48 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:247172 CAPLUS
DOCUMENT NUMBER: 134:256899
TITLE: Combination of loteprednol and .beta.2-adrenoceptor agonists for the treatment of allergies and respiratory tract diseases
INVENTOR(S): Szelenyi, Istvan; Poppe, Hildegard; Heer, Sabine; Engel, Juergen
PATENT ASSIGNEE(S): Asta Medica Ag, Germany
SOURCE: PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001022956	A2	20010405	WO 2000-EP9392	20000926
WO 2001022956	A3	20011011		
W: AU, BG, BR, BY, CA, CN, CZ, DZ, EE, GE, HR, HU, ID, IL, IN, IS, JP, KG, KR, KZ, LT, LV, MK, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TR, UA, US, UZ, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19947235	A1	20010405	DE 1999-19947235	19990930

PRIORITY APPLN. INFO.: DE 1999-19947235 A 19990930
AB The invention relates to a novel combination of a soft steroid, esp. loteprednol, and at least one .beta.2-adrenoceptor agonist for treating allergies and/or respiratory tract diseases simultaneously, sequentially or sep.; to drugs contg. said combination, to methods for producing such drugs and to the use of the novel combination for producing drugs for the simultaneous, sequential or sep. treatment of allergies and/or respiratory tract diseases. Thus and aerosol was prepd. that contained 6 .mu.g formoterol fumarate dihydrate and 200 .mu.g loteprednol per stroke. 2H-heptafluoropropane (1.000 g) propellant was cooled to -55.degree.C and 11.7 g Tagat TO in 11.7 g ethanol was added under stirring, followed by the addn. of 3.34 g micronized loteprednol etabonate and 0.1 g formoterol fumarate dihydrate. The suspension was dild. with 1,170.0 g 2H-heptafluoropropane, filled in metal containers with valves for dosing 50 .mu.L suspension per stroke.
CT **Drug delivery systems**
CT Drug delivery systems
CT Allergy
CT Steroids, biological studies
CT Respiratory tract
CT Drug delivery systems
CT Drug delivery systems
CT Adrenoceptor agonists

L99 ANSWER 10 OF 48 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:867964 CAPLUS
DOCUMENT NUMBER: 135:376803
TITLE: Stable pharmaceutical solution formulations for pressurized metered dose inhalers
INVENTOR(S): Lewis, David; Ganderton, David; Meakin, Brian; Brambilla, Gaetano; Ferraris, Alessandra
PATENT ASSIGNEE(S): Chiesi Farmaceutici S.P.A., Italy
SOURCE: Eur. Pat. Appl., 18 pp.

CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1157689	A1	20011128	EP 2001-112230	20010518
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
WO 2001089480	A1	20011129	WO 2000-EP4635	20000522
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002025299	A1	20020228	US 2001-860689	20010521

PRIORITY APPLN. INFO.: WO 2000-EP4635 A 20000522

AB An aerosol soln. compn. for use in an aerosol inhaler comprises an active material, a propellant contg. a hydrofluoroalkane, a cosolvent and optionally a low volatility component to increase the mass median aerodynamic diam. (MMAD) of the aerosol particles on actuation of the inhaler. The active ingredient is a .beta.2 agonist selected from salbutamol, formoterol, salmeterol, and TA-2005, salts thereof or their combination with steroid such as beclomethasone dipropionate, fluticasone propionate, budesonide, and its 22R-epimer or an anticholinergic atropine-like deriv. such as ipratropium bromide, oxitropium bromide, and tiotropium bromide. The compn. is stabilized by using a small amt. of mineral acid and a suitable can having part or all of its internal metallic surfaces made of stainless steel, anodized aluminum or lined with an inert org. coating.

CT **Drug delivery systems**
CT Alcohols, biological studies
CT Phenolic resins, uses
CT Alkanes, biological studies
CT Fluoropolymers, uses
CT Perfluorocarbons
CT Medical goods
CT Acids, biological studies
CT Fatty acids, biological studies
CT Epoxy resins, uses
CT Polysulfones, uses
CT Polyethers, uses
CT Cholinergic antagonists
CT Glycols, biological studies
CT Steroids, biological studies
CT Adrenoceptor agonists

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L99 ANSWER 11 OF 48 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2001122259 EMBASE
TITLE: [Anti-asthma drugs].
MEDICAMENTS ANTIASTHMATIQUES.
AUTHOR: Devillier P.

CORPORATE SOURCE: P. Devillier, Lab. de Pharmacologie-Toxicologie, Hopital Maison Blanche, Centre Hospitalier Univ. de Reims, 51092 Reims Cedex, France. devillier@chu-reims.fr
SOURCE: Revue du Praticien, (15 Mar 2001) 51/5 (523-531).
Refs: 26
ISSN: 0035-2640 CODEN: REPRA3
COUNTRY: France
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 015 Chest Diseases, Thoracic Surgery and Tuberculosis
030 Pharmacology
037 Drug Literature Index
LANGUAGE: French
SUMMARY LANGUAGE: English; French
AB With respect to their main mechanism of action, anti-asthma drugs are classified as bronchodilators or anti-inflammatory drugs. Inhaled .beta.2-agonists are the most effective bronchodilators. The shorts acting .beta.2-agonists are used for the relief of acute symptoms whereas long acting .beta.2-agonists are used on a regular basis, concomitantly with inhaled corticoids, for long-term control of symptoms. The others bronchodilators (methylxanthines or anticholinergics) may be used in addition to the inhaled .beta.2-agonists. The treatment of bronchial inflammation is required in mild to severe persistant asthma. Inhaled corticoids are the main anti-inflammatory drugs. They have a low risk of adverse events at usual dosages. Anti-leukotrienes belong to a new class of anti-inflammatory drugs represented by montelukast in France. This drug is orally administered, well tolerated and used in addition to inhaled corticoids. Cromones and ketotifen are used only in mild persistent asthma. Inhaled .beta.2-agonists, anti-leukotrienes and cromones are also used for prevention of exercise-induced asthma.
CT Medical Descriptors:
*asthma: DT, drug therapy
*asthma: ET, etiology
*asthma: PC, prevention
drug mechanism
bronchodilatation
antiinflammatory activity
exercise induced asthma: DT, drug therapy
exercise induced asthma: PC, prevention
nebulization
human
review
Drug Descriptors:
*antiasthmatic agent: DT, drug therapy
*antiasthmatic agent: PD, pharmacology
antiasthmatic agent: IH, inhalational drug administration
*bronchodilating agent: DT, drug therapy
bronchodilating agent: IH, inhalational drug administration
*corticosteroid: CB, drug combination
*corticosteroid: DT, drug therapy
corticosteroid: IH, inhalational drug administration
*leukotriene receptor blocking agent: DT, drug therapy
*leukotriene receptor blocking agent: PD, pharmacology
*antiinflammatory agent: CB, drug combination
*antiinflammatory agent: DT, drug therapy
methylxanthine: DT, drug therapy
beta 2 adrenergic receptor stimulating agent: DT, drug therapy
montelukast: CB, drug combination
montelukast: DT, drug therapy
montelukast: PO, oral drug administration
cromoglycate disodium: DT, drug therapy

ketotifen: DT, drug therapy
fenoterol: DT, drug therapy
fenoterol: IH, inhalational drug administration
pirbuterol: DT, drug therapy
pirbuterol: IH, inhalational drug administration
terbutaline: DT, drug therapy
terbutaline: IH, inhalational drug administration
terbutaline: PO, oral drug administration
salbutamol: DT, drug therapy
salbutamol: IH, inhalational drug administration
salbutamol: PO, oral drug administration
formoterol: DT, drug therapy
formoterol: IH, inhalational drug administration
salmeterol: DT, drug therapy
salmeterol: IH, inhalational drug administration
bambuterol: DT, drug therapy
bambuterol: PO, oral drug administration
theophylline: DT, drug therapy
bamifylline: DT, drug therapy
ipratropium bromide: DT, drug therapy
oxitropium bromide: DT, drug therapy
combivent: DT, drug therapy
beclometasone: DT, drug therapy
beclometasone: IH, inhalational drug administration
flunisolide: DT, drug therapy
flunisolide: IH, inhalational drug administration
budesonide: DT, drug therapy
budesonide: IH, inhalational drug administration
fluticasone: DT, drug therapy
fluticasone: IH, inhalational drug administration
nedocromil: DT, drug therapy
pirbuterol acetate
salbutamol sulfate
asmasal
buventol
spreor
formoterol fumarate
salmeterol xinafoate
oxeol
aminophylline
tedralan
xanthium
beclometasone dipropionate
beclone
bemedrex
prolair
spir
fluticasone propionate
fluticasone propionate plus salmeterol
nedocromil sodium
ketotifen fumarate

L99 ANSWER 12 OF 48 MEDLINE
ACCESSION NUMBER: 2002066100 MEDLINE
DOCUMENT NUMBER: 21649185 PubMed ID: 11791690
TITLE: In vitro aerosol performance and dose uniformity between the Foradile Aerolizer and the Oxis Turbuhaler.
AUTHOR: Chew N Y; Chan H K
CORPORATE SOURCE: Faculty of Pharmacy, University of Sydney, NSW, Australia.
SOURCE: JOURNAL OF AEROSOL MEDICINE, (2001 Winter) 14 (4) 495-501.

Journal code: 8809251. ISSN: 0894-2684.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: T
ENTRY MONTH: 200202
ENTRY DATE: Entered STN: 20020125
Last Updated on STN: 20020202
Entered Medline: 20020201

AB Dry powder inhalers for **eformoterol** fumarate dihydrate, a long-acting beta-2 agonist for bronchodilation, are currently available as the Foradile Aerolizer and the Oxis Turbuhaler. The two products are different in the formulation, the aerosol production mechanism, and the device resistance to air flow. These disparities are likely to lead to different aerosol characteristics. Our objective was to compare the in vitro performance of these two inhalers in producing **eformoterol** aerosols. Emitted dose uniformity was measured using a sampling apparatus described in the British Pharmacopaeia. Ten individual doses (dose number 2, 3, 15, 16, 30, 31, 45, 46, 59, and 60) of the entire content (60 doses) were collected from the Aerolizer and the Turbuhaler (six inhalers each). Particle size distribution of the aerosols generated by the two inhalers were measured by a multiple stage liquid impinger at four different air flows (30-120 L/min). **Eformoterol** collected from the sampling devices was measured by HPLC. Fine particles are those of < or = 1.7-5.0 microm in size in the aerosols obtained by interpolation of the data at the specified air flow. The Aerolizer showed a slight dependence of the emitted dose on the air flow, with the average emitted dose increased from 80% (at 30 L/min) to 90% (at higher flows) of the 12-microg label claim as compared with 60% for the Turbuhaler. When the emitted dose was normalized by the average emitted dose value, the Aerolizer showed less variation in the normalized emitted dose uniformity than the Turbuhaler. At high air flows, 90 and 120 L/min, both inhalers produced similar amounts (4 microg) of fine particles in the aerosol per dose discharged. As the flow as decreased to 30 and 60 L/min, both inhalers produced significantly less fine particles ($p < 0.05$), with the Oxis Turbuhaler producing lesser amounts than the Foradile Aerolizer. However, due to the different device resistance, comparing the inhaler performance at the same inspiratory effort may be more appropriate. At a comfortable effort of 40 cm H2O, the Foradile Aerolizer would produce a significantly higher fine particle mass in the aerosols. We conclude that the two inhalers were dissimilar in the emitted dose uniformity. The fine particle mass of **eformoterol** produced by the two inhalers was equivalent at high but not at low air flows. The disparities may be due to the difference in the formulation and the aerosol generation mechanism of the inhalers.

CT Check Tags: Comparative Study; Human; In Vitro; Support, Non-U.S. Gov't
Aerosols
*Bronchodilator Agents: AD, administration & dosage
*Ethanolamines: AD, administration & dosage
***Nebulizers and Vaporizers**
Particle Size
Powders

L99 ANSWER 13 OF 48 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2001261542 EMBASE
TITLE: Is there a need for another inhalative .beta.(2)-agonist besides formoterol in patients with asthma?.
AUTHOR: Matthys H.
CORPORATE SOURCE: Prof. H. Matthys, Aerztl. Dir. Abt. Pneumologie, Robert Koch Klinik, Universitatsklinik, Hugstetterstr. 55, D-79106 Freiburg, Germany. matthys@med1.ukl.uni-freiburg.de

SOURCE: Respiration, (2001) 68/4 (432-437).
Refs: 63
ISSN: 0025-7931 CODEN: RESPBD
COUNTRY: Switzerland
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 006 Internal Medicine
015 Chest Diseases, Thoracic Surgery and Tuberculosis
027 Biophysics, Bioengineering and Medical Instrumentation
037 Drug Literature Index
038 Adverse Reactions Titles
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Formoterol can substitute the rapid- and short-acting .beta.(2)-agonists as well as the slow- and long-acting salmeterol. Therefore formoterol in a fixed combination with an inhalant steroid reduces the aerosol devices necessary for asthma control to only one, to be used for regular 'controller' and, as needed, 'rescue therapy'. The side effect profile of formoterol is comparable to the short-acting .beta.(2)-agonists which makes the combination with a topically active glucocorticoid applicable in patients of any asthma severity as long as they are able to perform an inspiratory vital capacity maneuver. Copyright .COPYRGT. 2001 S. Karger AG, Basel.

CT Medical Descriptors:
*asthma: DI, diagnosis
*asthma: DT, drug therapy
*asthma: PC, prevention
drug choice
steroid therapy
aerosol
device
drug delivery system
disease control
disease severity
vital capacity
inspiratory capacity
prophylaxis
diagnostic test
drug safety
drug induced disease: SI, side effect
sustained release preparation
drug formulation
human
clinical trial
article
priority journal
Drug Descriptors:
*beta 2 adrenergic receptor stimulating agent: AE, adverse drug reaction
*beta 2 adrenergic receptor stimulating agent: CT, clinical trial
*beta 2 adrenergic receptor stimulating agent: AD, drug administration
*beta 2 adrenergic receptor stimulating agent: CB, drug combination
*beta 2 adrenergic receptor stimulating agent: CM, drug comparison
*beta 2 adrenergic receptor stimulating agent: DT, drug therapy
*beta 2 adrenergic receptor stimulating agent: PR, pharmaceutics
*beta 2 adrenergic receptor stimulating agent: PD, pharmacology
***beta 2 adrenergic receptor stimulating agent: IH, inhalational drug administration**
***formoterol: AE, adverse drug reaction**
***formoterol: CT, clinical trial**
***formoterol: AD, drug administration**

***formoterol: CB, drug combination**
***formoterol: CM, drug comparison**
***formoterol: DT, drug therapy**
***formoterol: PR, pharmaceutics**
***formoterol: PD, pharmacology**
***formoterol: IH, inhalational drug administration**
glucocorticoid: CB, drug combination
glucocorticoid: DT, drug therapy
glucocorticoid: PR, pharmaceutics
glucocorticoid: TP, topical drug administration
steroid: CT, clinical trial
steroid: AD, drug administration
steroid: CB, drug combination
steroid: DT, drug therapy
steroid: PR, pharmaceutics
steroid: IH, inhalational drug administration
steroid: PO, oral drug administration
cholinergic receptor blocking agent: PD, pharmacology
ipratropium bromide: PD, pharmacology
tiotropium bromide: PD, pharmacology
salmeterol: AE, adverse drug reaction
salmeterol: CB, drug combination
salmeterol: CM, drug comparison
salmeterol: DT, drug therapy
salmeterol: PR, pharmaceutics
salmeterol: PD, pharmacology
fenoterol: AD, drug administration
fenoterol: DT, drug therapy
fenoterol: PR, pharmaceutics
fenoterol: PD, pharmacology
fenoterol: IH, inhalational drug administration
salbutamol: DT, drug therapy
budesonide: CB, drug combination
budesonide: DT, drug therapy
budesonide: IH, inhalational drug administration
theophylline: CB, drug combination
theophylline: DT, drug therapy
theophylline: PR, pharmaceutics
theophylline: PO, oral drug administration
leukotriene receptor blocking agent: CB, drug combination
leukotriene receptor blocking agent: DT, drug therapy
leukotriene receptor blocking agent: PO, oral drug administration
fluticasone: CB, drug combination
fluticasone: DT, drug therapy
fluticasone: PR, pharmaceutics
fluticasone: IH, inhalational drug administration
formoterol fumarate: CB, drug combination
formoterol fumarate: DT, drug therapy
formoterol fumarate: PR, pharmaceutics
formoterol fumarate: IH, inhalational drug administration
fluticasone propionate plus salmeterol: DT, drug therapy
fluticasone propionate plus salmeterol: PR, pharmaceutics
fluticasone propionate plus salmeterol: IH, inhalational drug administration
atmadisc
discus
foradil p
miflonide
seretide mite
seretide forte

L99 ANSWER 14 OF 48 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2001243038 EMBASE
TITLE: Comparison of the anti-bronchoconstrictor activities of inhaled formoterol, its (R,R)- and (S,S)-enantiomers and salmeterol in the rhesus monkey.
AUTHOR: Fozard J.R.; Buescher H.
CORPORATE SOURCE: J.R. Fozard, Novartis Pharma AG., CH-4002 Basel, Switzerland. john_r.fozard@pharma.novartis.com
SOURCE: Pulmonary Pharmacology and Therapeutics, (2001) 14/4 (289-295).
Refs: 19
ISSN: 1094-5539 CODEN: PPTHFJ
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 015 Chest Diseases, Thoracic Surgery and Tuberculosis
030 Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English

AB The principle objective of this study was to define the anti-bronchoconstrictor effects of inhaled racemic formoterol and its (R,R)- and (S,S)-enantiomers in a new model of methacholine-induced bronchoconstriction in the rhesus monkey. A second long-acting .beta.(2) agonist, salmeterol, was included for comparison. Anaesthetized, spontaneously breathing rhesus monkeys were set up for measuring airway resistance. Blood pressure, heart rate and serum potassium concentrations were measured concomitantly to gauge systemic exposure and the potential for side effects. Formoterol, 0.14, 0.34 and 1.15 .mu.g/kg, administered by aerosol, induced rapidly developing, sustained, dose-related inhibition of the bronchoconstrictor responses to aerosolised methacholine (maximum 76%) accompanied by sustained, dose-related tachycardia. (R,R)-formoterol, 0.56 .mu.g/kg, induced anti-bronconstrictor effects and an associated tachycardia which corresponded closely to the effects seen following twice the dose of the racemate. (S,S)-formoterol, 0.54 .mu.g/kg, was inactive. Salmeterol, 1.4 .mu.g/kg, had no significant anti-bronchoconstrictor effect whereas doses of 5.5 and 30 .mu.g/kg produced quantitatively similar but submaximal anti-bronchoconstrictor effects (maximum 47%). Sustained dose-dependent tachycardia was seen with salmeterol over the full dose range. Thus, the anti-bronchoconstrictor activity of formoterol resides in the (R,R) enantiomer and the (S,S) enantiomer does not interfere with the activity when present in the racemic form. Furthermore, the data indicate that the present model of methacholine-induced bronchospasm in the rhesus monkey could be useful in defining the key properties of .beta.(2) agonist bronchodilators such as relative potency, efficacy, duration of action and potential for systemic side effects. .COPYRGT. 2001 Academic Press.

CT Medical Descriptors:
enantiomer
rhesus monkey
drug activity
drug effect
bronchospasm
airway resistance
blood pressure
heart rate
potassium blood level
aerosol
tachycardia: CO, complication
dose response

drug potency
drug efficacy
disease model
nonhuman
male
animal experiment
animal model
controlled study
article
priority journal
Drug Descriptors:
***formoterol: CM, drug comparison**
***formoterol: TO, drug toxicity**
***formoterol: PD, pharmacology**
***formoterol: IH, inhalational drug administration**
*salmeterol: CM, drug comparison
*salmeterol: TO, drug toxicity
*salmeterol: PD, pharmacology
***salmeterol: IH, inhalational drug administration**
bronchodilating agent: TO, drug toxicity
methacholine
potassium: EC, endogenous compound

L99 ANSWER 15 OF 48 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2001406622 EMBASE
TITLE: Managing stable chronic obstructive pulmonary disease.
SOURCE: Drug and Therapeutics Bulletin, (2001) 39/11 (81-85).
Refs: 57
ISSN: 0012-6543 CODEN: DRTBAE
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 015 Chest Diseases, Thoracic Surgery and Tuberculosis
019 Rehabilitation and Physical Medicine
030 Pharmacology
037 Drug Literature Index
038 Adverse Reactions Titles
039 Pharmacy
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Over 26,000 people died of chronic obstructive pulmonary disease (COPD) in England and Wales in 1999. The disease is a common cause of consultations in primary care and accounts for as many as 1 in 8 medical admissions. Patients with stable COPD, the focus of this article, experience chronic symptoms such as breathlessness, cough, sputum production, wheeze and chest tightness, which worsen slowly over time. We do not deal here with the management of severe acute exacerbations, which are caused by an additional (often infective) process.
CT Medical Descriptors:
*chronic obstructive lung disease: DI, diagnosis
*chronic obstructive lung disease: DT, drug therapy
*chronic obstructive lung disease: RH, rehabilitation
*chronic obstructive lung disease: SU, surgery
*chronic obstructive lung disease: TH, therapy
patient care
mortality
United Kingdom
consultation
primary medical care
hospital admission
symptom

dyspnea
coughing
sputum
wheezing
thorax pain
disease severity
acute disease
disease exacerbation
lung infection: DT, drug therapy
spirometry
oxygen therapy
medical nebulizer
smoking cessation
substitution therapy
side effect: SI, side effect
drug blood level
metered dose inhaler
dry powder
drug delivery system
nebulization
rehabilitation
ambulatory care
lung surgery
lung transplantation
travel
human
clinical trial
randomized controlled trial
controlled study
article
Drug Descriptors:
*oxygen: CT, clinical trial
*oxygen: DT, drug therapy
nicotine: DT, drug therapy
amfebutamone: DT, drug therapy
bronchodilating agent: DT, drug therapy
beta adrenergic receptor stimulating agent: CB, drug combination
beta adrenergic receptor stimulating agent: DT, drug therapy
beta adrenergic receptor stimulating agent: PD, pharmacology
muscarinic receptor blocking agent: CB, drug combination
muscarinic receptor blocking agent: DO, drug dose
muscarinic receptor blocking agent: DT, drug therapy
muscarinic receptor blocking agent: PR, pharmaceutics
muscarinic receptor blocking agent: PD, pharmacology
muscarinic receptor blocking agent: IH, inhalational drug administration
theophylline: AE, adverse drug reaction
theophylline: CB, drug combination
theophylline: CR, drug concentration
theophylline: DO, drug dose
theophylline: IT, drug interaction
theophylline: DT, drug therapy
theophylline: PR, pharmaceutics
theophylline: PK, pharmacokinetics
theophylline: PD, pharmacology
theophylline: PO, oral drug administration
salbutamol: CT, clinical trial
salbutamol: CM, drug comparison
salbutamol: DO, drug dose
salbutamol: DT, drug therapy

salbutamol: PR, pharmaceutics
salbutamol: PD, pharmacology
salbutamol: IH, inhalational drug administration
terbutaline: CT, clinical trial
terbutaline: CM, drug comparison
terbutaline: DO, drug dose
terbutaline: DT, drug therapy
terbutaline: PR, pharmaceutics
terbutaline: PD, pharmacology
terbutaline: IH, inhalational drug administration
placebo
ipratropium bromide: DO, drug dose
ipratropium bromide: DT, drug therapy
ipratropium bromide: PR, pharmaceutics
ipratropium bromide: PD, pharmacology
ipratropium bromide: IH, inhalational drug administration
oxitropium bromide: DO, drug dose
oxitropium bromide: DT, drug therapy
oxitropium bromide: PR, pharmaceutics
oxitropium bromide: PD, pharmacology
oxitropium bromide: IH, inhalational drug administration
salmeterol: CT, clinical trial
salmeterol: CM, drug comparison
salmeterol: DO, drug dose
salmeterol: DT, drug therapy
salmeterol: PR, pharmaceutics
salmeterol: PD, pharmacology
salmeterol: IH, inhalational drug administration
formoterol: CT, clinical trial
formoterol: CM, drug comparison
formoterol: DO, drug dose
formoterol: DT, drug therapy
formoterol: PR, pharmaceutics
formoterol: PD, pharmacology
formoterol: IH, inhalational drug administration
macrolide: IT, drug interaction
macrolide: PD, pharmacology
quinolone: IT, drug interaction
quinolone: PD, pharmacology
corticosteroid: CT, clinical trial
corticosteroid: DO, drug dose
corticosteroid: DT, drug therapy
corticosteroid: PR, pharmaceutics
corticosteroid: PD, pharmacology
corticosteroid: IH, inhalational drug administration
corticosteroid: PO, oral drug administration
fluticasone: CT, clinical trial
fluticasone: DO, drug dose
fluticasone: DT, drug therapy
fluticasone: PR, pharmaceutics
fluticasone: PD, pharmacology
fluticasone: IH, inhalational drug administration
fluticasone: PO, oral drug administration
budesonide: CT, clinical trial
budesonide: DO, drug dose
budesonide: DT, drug therapy
budesonide: PR, pharmaceutics
budesonide: PD, pharmacology
budesonide: IH, inhalational drug administration
budesonide: PO, oral drug administration

mucolytic agent: CT, clinical trial
mucolytic agent: DT, drug therapy
mucolytic agent: PD, pharmacology
mucolytic agent: PO, oral drug administration
carbocisteine: CT, clinical trial
carbocisteine: DT, drug therapy
carbocisteine: PD, pharmacology
carbocisteine: PO, oral drug administration
influenza vaccine: DT, drug therapy
Pneumococcus polysaccharide: DT, drug therapy
antibiotic agent: DT, drug therapy

L99 ANSWER 16 OF 48 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2001086626 EMBASE
TITLE: [Aerosol therapy in the new millennium: How to proceed after the elimination of CFC-driven pMDI's containing short-acting .beta.(2)-agonists].
INHALATIONSTHERAPIE IM NEUEN MILLENNIUM. WIE WEITER NACH DEM VERBOT VON FCKW-HALTIGEN KURZWIRKSAMEN .beta.(2)-AGONISTEN?.
AUTHOR: Matthys H.
CORPORATE SOURCE: Dr. H. Matthys, Abteilung Pneumologie, Universitatsklinikum Freiburg, Hugstetter Strasse 55, D-79106 Freiburg, Germany
SOURCE: Atemwegs- und Lungenkrankheiten, (2001) 27/2 (79-84).
Refs: 26
ISSN: 0341-3055 CODEN: ATLUDF
COUNTRY: Germany
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 015 Chest Diseases, Thoracic Surgery and Tuberculosis
027 Biophysics, Bioengineering and Medical Instrumentation
037 Drug Literature Index
LANGUAGE: German
SUMMARY LANGUAGE: English; German
AB After the ban of CFC-driven metered dose inhalers (pMDI's) containing short-acting .beta.(2)-agonists, there are 3 alternatives left for acute reliever therapy of patients with asthma and chronic bronchitis: 1) Dry powder inhalers with short-acting .beta.(2)-agonists or formoterol, 2) HFA-driven pMDI's with short-acting .beta.(2)-agonists, 3) Nebulizers with short-acting .beta.(2)-agonists solutions. The literature which supports the use of formoterol as a reliever and controler drug substituting short-acting .beta.(2)-agonists and salmeterol in one molecule is discussed as well as the new hierarchy to prescribe aerosol therapy in patients suffering reversible airway obstruction.
CT Medical Descriptors:
*metered dose inhaler
*asthma: DT, drug therapy
*chronic bronchitis: DT, drug therapy
dry powder
nebulizer
aerosol
airway obstruction: DT, drug therapy
lung function
human
review
Drug Descriptors:
*beta 2 adrenergic receptor stimulating agent: AD, drug administration
*beta 2 adrenergic receptor stimulating agent: DT, drug therapy
***beta 2 adrenergic receptor stimulating agent: IH, inhalational drug administration**

***formoterol: AD, drug administration**
***formoterol: DT, drug therapy**
***formoterol: IH, inhalational drug administration**
*salmeterol: AD, drug administration
*salmeterol: DT, drug therapy
***salmeterol: IH, inhalational drug administration**
terbutaline: AD, drug administration
terbutaline: DT, drug therapy
terbutaline: IH, inhalational drug administration
salbutamol: AD, drug administration
salbutamol: DT, drug therapy
salbutamol: IH, inhalational drug administration

L99 ANSWER 17 OF 48 MEDLINE
ACCESSION NUMBER: 2001492464 MEDLINE
DOCUMENT NUMBER: 21425858 PubMed ID: 11534896
TITLE: Pharmacological similarities and differences between beta2-agonists.
AUTHOR: Lotvall J
CORPORATE SOURCE: Department of Respiratory Medicine and Allergology, Goteborg University, Sweden.. lotvallj@mailer.mednet.gu.se
SOURCE: RESPIRATORY MEDICINE, (2001 Aug) 95 Suppl B S7-11. Ref: 15
Journal code: RME; 8908438. ISSN: 0954-6111.
PUB. COUNTRY: England: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200109
ENTRY DATE: Entered STN: 20010906
Last Updated on STN: 20011001
Entered Medline: 20010927

AB Formoterol and salmeterol are both long-acting bronchodilators that are effective in the treatment of asthma. However, some differences exist in their pharmacology that are reflected in their clinical profiles. Formoterol has a rapid onset of action, whereas salmeterol causes bronchodilation in a somewhat slower manner. However, both ofthese drugs are long-acting. After single doses clear effects are maintained for 12 h after inhalation, and with high doses effects are observed even at 24 h. Differences between the maximal effects of both drugs are also a consequence of their pharmacological properties. Thus, formoterol has higher intrinsic activity than salmeterol, which means that it is a full agonist, whereas salmeterol is a partial agonist on the beta2-receptor. Physicochemical properties of the drugs may explain the differences in onset and duration of action. Adequate **water** solubility and moderate lipophilicity of **formoterol** ensures rapid diffusion to the beta2-receptor on the smooth muscle and rapid bronchodilating activity. Salmeterol, on the other hand, may diffuse more slowly to the beta2-receptor because of its high lipophilicity explaining the slower onset of action. Unlike salbutamol, which is hydrophilic and has a rapid onset and short duration of action, both formoterol and salmeterol possess adequate lipophilic properties to remain in the airway tissues as a depot in close vicinity to the beta2-receptor, explaining their long duration of effect. The long duration of salmeterol has also been suggested to depend on an anchored binding within the beta2-receptor. The pharmacological evidence for a rapid onset of action of formoterol, but long duration of effect, is supported by several clinical studies. The fast onset of bronchodilation and high intrinsic activity of formoterol therefore suggest that it can be used for relief treatment in patients with asthma

if they are concomitantly treated with inhaled glucocorticoids.
CT Check Tags: Animal; Human
*Adrenergic beta-Agonists: PD, pharmacology
Albuterol: AA, analogs & derivatives
*Albuterol: PD, pharmacology
*Asthma: DT, drug therapy
Blood Glucose: ME, metabolism
Blood Pressure: DE, drug effects
Bronchodilator Agents: PD, pharmacology
Dose-Response Relationship, Drug
*Ethanolamines: PD, pharmacology
Heart Rate: DE, drug effects
Potassium: BL, blood
Randomized Controlled Trials
*Receptors, Adrenergic, beta-2: DE, drug effects
Terbutaline: PD, pharmacology
Time Factors

L99 ANSWER 18 OF 48 DRUGU COPYRIGHT 2002 THOMSON DERWENT
ACCESSION NUMBER: 2001-37397 DRUGU P T
TITLE: Pharmacological similarities and differences between beta-agonists.
AUTHOR: Lotvall J
CORPORATE SOURCE: Univ.Gothenburg
LOCATION: Gothenburg, Swed.
SOURCE: Respir.Med. (95, Suppl. B, S7-S11, 2001) 6 Fig. 1 Tab. 15 Ref.
CODEN: RMEDE ISSN: 0954-6111
AVAIL. OF DOC.: The Lung Pharmacology Group, Department of Respiratory Medicine and Allergology, Guldhedsgatan 10A, SE-413 46 Goteborg, Sweden. (e-mail: lotvallj@mailer.mednet.gu.se).
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB The pharmacological similarities and differences between beta-2-agonists is reviewed with reference to receptor interaction, onset of action and duration of effect and clinical profiles. Drugs mentioned include **formoterol** (FO), salmeterol (SA), salbutamol and terbutaline. Adequate **water** solubility and moderate lipophilicity of FO ensure rapid diffusion to the beta-2 receptor on the smooth muscle and rapid bronchodilating activity. SA may diffuse more slowly to the receptor due to high lipophilicity, with consequent slower onset of action. Salbutamol, which is hydrophilic, has a rapid onset and short duration of action. FO and SA having adequate lipophilic properties to remain in the airways, have a longer duration of effect. These pharmacological findings are supported clinically.
CT ASTHMA *TR; PNEUMOPATHY *TR; PNEUMOPATHY *TR; SYMPATHOMIMETIC-BETA *FT; IN-VIVO *FT; REVIEW *FT; RECEPTOR *FT
[01] SYMPATHOMIMETICS-BETA *FT; MAIN-TOPIC *FT; ANTIASTHMATICS *FT; PH *FT
[02] **FORMOTEROL** *PH; SALMETEROL *PH; SALBUTAMOL *PH; TERBUTALINE *PH; **FORMOTEROL** *TR; SALMETEROL *TR; SALBUTAMOL *TR; TERBUTALINE *TR; ANTIASTHMATIC *FT; PH *FT; TR *FT

L99 ANSWER 19 OF 48 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
ACCESSION NUMBER: 2000:573659 CAPLUS
DOCUMENT NUMBER: 133:168405
TITLE: Pharmaceuticals containing formoterol and a tiotropium salt
INVENTOR(S): Hassan, Ian Francis; Clarke, Jeremy Guy; Cuenoud,

Bernard
PATENT ASSIGNEE(S): Novartis A.-G., Switz.; Novartis-Erfindungen Verwaltungsgesellschaft m.b.H.
SOURCE: PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000047200	A1	20000817	WO 2000-EP958	20000207
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
BR 2000008039	A	20011106	BR 2000-8039	20000207
EP 1158970	A1	20011205	EP 2000-902663	20000207
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
NO 2001003460	A	20010913	NO 2001-3460	20010712

PRIORITY APPLN. INFO.: GB 1999-2689 A 19990208
WO 2000-EP958 W 20000207

AB A compn. contains, sep. or together, formoterol or a pharmaceutically acceptable salt or a solvate of formoterol or the salt, and a tiotropium salt for simultaneous, sequential or sep. administration in the treatment of an inflammatory or obstructive airways disease. Thus, a dry powder formulation contained formoterol fumarate dihydrate 0.05, tiotropium bromide 0.05, and lactose monohydrate 99.90%.

CT **Drug delivery systems**
CT Drug delivery systems
CT Respiratory tract
CT Medical goods
CT Anti-inflammatory agents
CT Particle size distribution
CT Carbohydrates, biological studies

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L99 ANSWER 20 OF 48 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 2
ACCESSION NUMBER: 2000:401693 CAPLUS
DOCUMENT NUMBER: 133:34456
TITLE: A medicinal aerosol formulation
INVENTOR(S): Adjei, Akwete; Cutie, Anthony J.
PATENT ASSIGNEE(S): Aeropharm Technology Incorporated, USA
SOURCE: PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2000033892 A1 20000615 WO 1999-US28644 19991203
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
US 6261539 B1 20010717 US 1998-209228 19981210
EP 1135173 A1 20010926 EP 1999-965104 19991203
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
PRIORITY APPLN. INFO.: US 1998-209228 A 19981210
WO 1999-US28644 W 19991203

AB This invention relates to a medicinal aerosol formulation and more particularly, to a medicinal aerosol formulation contg. a particulate drug, a propellant and a stabilizing agent comprising a water addn. Generally the formulations can be prepd. by combining (1) the drug, e.g. triamcinolone acetonide, in an amt. sufficient to provide a plurality of therapeutically EDs, (2) the water addn. in an amt. effective to stabilize each of the formulations, (3) the propellant in an amt. sufficient to propel a plurality of doses from an aerosol canister, and (4) any further optional components, e.g. ethanol as a cosolvent and dispersing the components.

CT Drug delivery systems
CT Drug delivery systems
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L99 ANSWER 21 OF 48 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:814297 CAPLUS
DOCUMENT NUMBER: 133:366421
TITLE: Pharmaceuticals containing (S,R)-formoterol
INVENTOR(S): Jerussi, Thomas P.; Senanayake, Chris Hugh
PATENT ASSIGNEE(S): Sepracor Inc., USA
SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000067741	A2	20001116	WO 2000-US12648	20000509
WO 2000067741	A3	20010315		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 2001007679 A1 20010712 US 1999-309154 19990510
US 6303145 B2 20011016
PRIORITY APPLN. INFO.: US 1999-309154 A 19990510

AB A method and compn. are disclosed utilizing the pure (S,R)-formoterol (I) isomer of formoterol, which is a bronchodilator with reduced adverse effects. I may be conveniently and safely formulated for aerosol administration. Thus, an inhalation aerosol contained I 180 mg, trichloromonofluoromethane 15.16, dichlorodifluoromethane 15.16, and sorbitan oleate 1.05 g.
CT **Drug delivery systems**
CT Drug delivery systems
CT Drug delivery systems
CT Gelatins, biological studies
CT Polysaccharides, biological studies
CT Drug delivery systems
CT Drug delivery systems
CT Adrenoceptors
CT Adrenoceptors
CT Adrenoceptors

L99 ANSWER 22 OF 48 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2000-579213 [54] WPIDS
DOC. NO. CPI: C2000-172401
TITLE: Medicament contains synergistic mixture of **formoterol** and mometasone furoate for treating inflammatory or obstructive airway diseases.
DERWENT CLASS: B01 B03
INVENTOR(S): CLARKE, J G; DANAHAY, H L; HASSAN, I F
PATENT ASSIGNEE(S): (NOVS) NOVARTIS AG; (NOVS) NOVARTIS-ERFINDUNGEN VERW GES MBH
COUNTRY COUNT: 91
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000051591	A1	20000908	(200054)*	EN	24
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
AU 2000032843	A	20000921	(200065)		
NO 2001003988	A	20010816	(200169)		
EP 1156790	A1	20011128	(200201)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
SK 2001001230	A3	20011203	(200203)		
BR 2000008699	A	20011226	(200206)		
CZ 2001003168	A3	20011212	(200206)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000051591	A1	WO 2000-EP1722	20000301
AU 2000032843	A	AU 2000-32843	20000301
NO 2001003988	A	WO 2000-EP1722	20000301
		NO 2001-3988	20010816
EP 1156790	A1	EP 2000-910739	20000301
		WO 2000-EP1722	20000301
SK 2001001230	A3	WO 2000-EP1722	20000301
		SK 2001-1230	20000301

BR 2000008699 A	BR 2000-8699	20000301
	WO 2000-EP1722	20000301
CZ 2001003168 A3	WO 2000-EP1722	20000301
	CZ 2001-3168	20000301

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000032843	A	Based on	WO 200051591
EP 1156790	A1	Based on	WO 200051591
SK 2001001230	A3	Based on	WO 200051591
BR 2000008699	A	Based on	WO 200051591
CZ 2001003168	A3	Based on	WO 200051591

PRIORITY APPLN. INFO: GB 1999-4919 19990303

AB WO 200051591 A UPAB: 20001027

NOVELTY - Medicament contains separately or together:

(a) **formoterol** or its salt or solvate; and

(b) mometasone furoate for simultaneous, sequential or separate administration in the treatment of an inflammatory or obstructive airway disease.

ACTIVITY - Antiinflammatory; respiratory; antiasthmatic. No activity data is given.

MECHANISM OF ACTION - None given.

USE - For treating inflammatory or obstructive airway diseases including asthma, acute lung injury, adult respiratory distress syndrome, pneumoconiosis and chronic obstructive pulmonary, airway or lung disease including chronic bronchitis and exacerbation of airways hyperactivity due to drug therapy.

ADVANTAGE - Combination is synergistic allowing reduction in amount of steroidal mometasone furoate to be significantly reduced and thus reducing risk of undesirable side effects.

Dwg.0/0

L99 ANSWER 23 OF 48 WPIDS (C) 2002 THOMSON DERWENT

ACCESSION NUMBER: 2000-533078 [48] WPIDS

DOC. NO. CPI: C2000-158895

TITLE: Composition for treatment of inflammatory or obstructive airway diseases e.g. asthma or bronchitis, comprising **formoterol** and fluticasone propionate.

DERWENT CLASS: B01 B05

INVENTOR(S): CLARKE, J G; DANAHAY, H L; HASSAN, I F

PATENT ASSIGNEE(S): (NOVS) NOVARTIS AG; (NOVS) NOVARTIS-ERFINDUNGEN VERW GES MBH

COUNTRY COUNT: 91

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000048587	A1	20000824	(200048)*	EN	20

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW

W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2000029115	A	20000904	(200103)
NO 2001003987	A	20010816	(200169)
BR 2000008276	A	20011106	(200175)

CZ 2001002976 A3 20011114 (200175)
EP 1152753 A1 20011114 (200175) EN
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
SK 2001001184 A3 20011203 (200203)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000048587	A1	WO 2000-EP1270	20000216
AU 2000029115	A	AU 2000-29115	20000216
NO 2001003987	A	WO 2000-EP1270	20000216
		NO 2001-3987	20010816
BR 2000008276	A	BR 2000-8276	20000216
		WO 2000-EP1270	20000216
CZ 2001002976	A3	WO 2000-EP1270	20000216
		CZ 2001-2976	20000216
EP 1152753	A1	EP 2000-907572	20000216
		WO 2000-EP1270	20000216
SK 2001001184	A3	WO 2000-EP1270	20000216
		SK 2001-1184	20000216

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000029115	A	Based on	WO 200048587
BR 2000008276	A	Based on	WO 200048587
CZ 2001002976	A3	Based on	WO 200048587
EP 1152753	A1	Based on	WO 200048587
SK 2001001184	A3	Based on	WO 200048587

PRIORITY APPLN. INFO: GB 1999-3759 19990218
AB WO 200048587 A UPAB: 20001001
NOVELTY - A pharmaceutical composition comprises **formoterol** (A) or its salt or solvate and fluticasone propionate (B).
ACTIVITY - Antiinflammatory; antiasthmatic; antiallergic; expectorant. No activity example given.
MECHANISM OF ACTION - Beta-2 agonist.
USE - The composition can be used for the treatment of inflammatory or obstructive airway disease (claimed) e.g. asthma, acute lung injury, acute respiratory distress syndrome (ARDS), chronic obstructive pulmonary-, airway- or lung- disease, chronic bronchitis, emphysema, bronchiestasis, airway hyper-reactivity and pneumoconiosis (e.g. asbestosis).
ADVANTAGE - The composition is synergistic and has rapid onset and long duration of action.
Dwg.0/0

L99 ANSWER 24 OF 48 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2000-182903 [16] WPIDS
DOC. NO. CPI: C2000-057396
TITLE: **Aerosol** propellant comprising dinitrogen monoxide and hydrofluoroalkane and optionally containing a pharmaceutically active substance.
DERWENT CLASS: A25 A96 B07
INVENTOR(S): HERZOG, K; KELLER, M; KRAUS, H; MUELLER-WALZ, R
PATENT ASSIGNEE(S): (JAGO-N) JAGO RESEARCH AG
COUNTRY COUNT: 28

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000006121	A1	20000210	(200016)*	GE	41
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
W: AU CA CN IN JP NO NZ US ZA					
AU 9945989	A	20000221	(200029)		
EP 1100465	A1	20010523	(200130)	GE	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
NO 2001000391	A	20010323	(200130)		
ZA 2001000408	A	20010926	(200161)		42
CN 1312706	A	20010912	(200202)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000006121	A1	WO 1999-CH337	19990722
AU 9945989	A	AU 1999-45989	19990722
EP 1100465	A1	EP 1999-928996	19990722
		WO 1999-CH337	19990722
NO 2001000391	A	WO 1999-CH337	19990722
		NO 2001-391	20010123
ZA 2001000408	A	ZA 2001-408	20010115
CN 1312706	A	CN 1999-809683	19990722

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9945989	A	Based on	WO 200006121
EP 1100465	A1	Based on	WO 200006121

PRIORITY APPLN. INFO: CH 1998-1565 19980724

AB WO 200006121 A UPAB: 20000330

NOVELTY - A compression-fluidized **aerosol** propellant comprising dinitrogen monoxide (I) and a hydrofluoroalkane (II) is new.

DETAILED DESCRIPTION - A compression-fluidized **aerosol** propellant comprising dinitrogen monoxide (I) and a hydrofluoroalkane of formula (II) is new.

CxHyFz (II)

x = 1-3;

y and z = at least 1 and y + z = 2x + 2.

INDEPENDENT CLAIMS are also included for:

(A) a medicinal **aerosol** formulation comprising the propellant and a pharmaceutically active substance; and

(B) the preparation of the formulation.

USE - The medicinal **aerosol** formulation is used especially for nasal and inhalative application. It is preferably filled into a pressure-tight container fitted with a dosage valve and an adapter for **nebulization** or inhalation.

ADVANTAGE - The propellant improves the wetting properties of pharmaceutically active substances and facilitates the production of suspension **aerosols** with improved suspension and stability properties and of solution **aerosols** with improved storage stability and reduced ethanol content. It also improves dosage accuracy and the adjustment of the particle size distribution as well as mass median aerodynamic diameter, increases the fine particle dose and lowers the oropharyngeal deposition.

Dwg.0/0

L99 ANSWER 25 OF 48 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2000-304726 [27] WPIDS
CROSS REFERENCE: 2000-294150 [26]; 2000-304725 [26]
DOC. NO. CPI: C2000-092694
TITLE: Stable concentrated liquid formulation of inhalable drug, e.g. **formoterol** or salbutamol, in solution or suspension medium, used after dilution for treatment of respiratory disorders by inhalation.
DERWENT CLASS: B05 B07 P31 P33 P34 Q34
INVENTOR(S): HOCHRAINER, D; ZIERENBERG, B
PATENT ASSIGNEE(S): (BOEH) BOEHRINGER INGELHEIM PHARMA KG; (BOEH) BOEHRINGER INGELHEIM PHARM AG; (HOCH-I) HOCHRAINER D; (ZIER-I) ZIERENBERG B
COUNTRY COUNT: 52
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 19847970	A1	20000420	(200027)*		7
WO 2000023037	A1	20000427	(200029)	GE	
RW: AT BE CH CY DE DK EA ES FI FR GB GR IE IT LU MC NL PT SE					
W: AE AU BG BR CA CN CZ EE HR HU ID IL IN JP KR LT LV MX NO NZ PL RO SG SI SK TR UA US UZ VN YU ZA					
AU 9963370	A	20000508	(200037)		
BR 9914608	A	20010703	(200141)		
NO 2001001830	A	20010618	(200141)		
EP 1119334	A1	20010801	(200144)	GE	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC NL PT RO SE SI					
US 2001032643	A1	20011025	(200170)		
CZ 2001001363	A3	20011017	(200172)		
SK 2001000495	A3	20011106	(200176)		
KR 2001080187	A	20010822	(200213)		
CN 1323186	A	20011121	(200218)		
HU 2001003888	A2	20020228	(200223)		

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
DE 19847970	A1		DE 1998-19847970	19981017
WO 2000023037	A1		WO 1999-EP7589	19991009
AU 9963370	A		AU 1999-63370	19991009
BR 9914608	A		BR 1999-14608	19991009
			WO 1999-EP7589	19991009
NO 2001001830	A		WO 1999-EP7589	19991009
			NO 2001-1830	20010410
EP 1119334	A1		EP 1999-950688	19991009
			WO 1999-EP7589	19991009
US 2001032643	A1	Cont of	US 1999-416476	19991012
			US 2001-871500	20010531
CZ 2001001363	A3		WO 1999-EP7589	19991009
			CZ 2001-1363	19991009
SK 2001000495	A3		WO 1999-EP7589	19991009
			SK 2001-495	19991009
KR 2001080187	A		KR 2001-704780	20010416
CN 1323186	A		CN 1999-812222	19991009
HU 2001003888	A2		WO 1999-EP7589	19991009

HU 2001-3888 19991009

FILING DETAILS:

PATENT NO	KIND		PATENT NO		
AU 9963370	A	Based on	WO 200023037		
BR 9914608	A	Based on	WO 200023037		
EP 1119334	A1		20 011110	DE	19847968
		Based on	WO 200023037		
CZ 2001001363	A3	Based on	WO 200023037		
SK 2001000495	A3	Based on	WO 200023037		
HU 2001003888	A2	Based on	WO 200023037		

PRIORITY APPLN. INFO: DE 1998-19847970 19981017; DE 1998-19847968 19981017; US 1998-112380P 19981214

AB DE 19847970 A UPAB: 20020411
NOVELTY - A storage-stable formulation of drug(s) (I) effective on inhalation comprises a solvent or suspension medium and (I), where the concentration of (I) is 10-500 times the therapeutically effective concentration.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for the use of the formulation for administration by inhalation, after 10-500 fold dilution.

ACTIVITY - Respiratory.

MECHANISM OF ACTION - Beta-mimetic.

USE - Use of the formulations for the treatment of respiratory diseases by inhalation is claimed; use in intranasal therapy is also mentioned in the disclosure.

ADVANTAGE - Stable **aqueous** liquid formulations are provided, which can be stored in the container of a **nebulizer** inhaler (especially in a two- or multi-chamber cartridge of a high pressure atomizer) for several months or even up to 5 years without reduction in pharmaceutical quality. The storage formulation can be converted simply and rapidly into an inhalation formulation.
Dwg.0/0

L99 ANSWER 26 OF 48 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 2000-294150 [26] WPIDS
CROSS REFERENCE: 2000-304725 [26]; 2000-304726 [26]
DOC. NO. CPI: C2000-089042
TITLE: Stable liquid formulation of **formoterol** in solution or suspension medium, used after dilution for treatment of asthma by inhalation.
DERWENT CLASS: B05
INVENTOR(S): HOCHRAINER, D; ZIERENBERG, B
PATENT ASSIGNEE(S): (BOEH) BOEHRINGER INGELHEIM PHARMA KG
COUNTRY COUNT: 52
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 19847969	A1	20000420	(200026)*		7
WO 2000023065	A2	20000427	(200029)	GE	
RW: AT BE CH CY DE DK EA ES FI FR GB GR IE IT LU MC NL PT SE					
W: AE AU BG BR CA CN CZ EE HR HU ID IL IN JP KR LT LV MX NO NZ PL RO SG SI SK TR UA US UZ VN YU ZA					
AU 9962019	A	20000508	(200037)		
US 6150418	A	20001121	(200101)		
NO 2001001663	A	20010403	(200137)		

BR 9914507 A 20010626 (200140)
EP 1121112 A2 20010808 (200146) GE
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC NL PT RO SE SI
CZ 2001001362 A3 20010912 (200158)
SK 2001000494 A3 20010911 (200159)
KR 2001075637 A 20010809 (200211)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19847969	A1	DE 1998-19847969	19981017
WO 2000023065	A2	WO 1999-EP7581	19991009
AU 9962019	A	AU 1999-62019	19991009
US 6150418	A	US 1999-416474	19991012
NO 2001001663	A	WO 1999-EP7581	19991009
		NO 2001-1663	20010403
BR 9914507	A	BR 1999-14507	19991009
		WO 1999-EP7581	19991009
EP 1121112	A2	EP 1999-948972	19991009
		WO 1999-EP7581	19991009
CZ 2001001362	A3	WO 1999-EP7581	19991009
		CZ 2001-1362	19991009
SK 2001000494	A3	WO 1999-EP7581	19991009
		SK 2001-494	19991009
KR 2001075637	A	KR 2001-704765	20010416

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9962019	A	Based on	WO 200023065
BR 9914507	A	Based on	WO 200023065
EP 1121112	A2	Based on	WO 200023065
CZ 2001001362	A3	Based on	WO 200023065
SK 2001000494	A3	Based on	WO 200023065

PRIORITY APPLN. INFO: DE 1998-19847969 19981017; US 1998-112380P 19981214

AB DE 19847969 A UPAB: 20020215
NOVELTY - A storage-stable **formoterol** (I) formulation comprises (I) (or its salt or addition product) at a concentration of 10-500 mg/ml (as (I)) in a solvent or suspension medium.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for the use of the formulation for administration by inhalation, after dilution to a (I) concentration of 0.9-1.5 mg/ml.

ACTIVITY - Antiasthmatic; bronchodilator; hypoglycemic.

MECHANISM OF ACTION - beta 2 adrenergic stimulant; leukotriene release inhibitor; histamine release inhibitor.

USE - (I) is a beta 2 adrenergic stimulant, useful in the treatment of respiratory diseases, particularly asthma, by inhalation. Use of the formulations for the treatment of respiratory diseases by inhalation is claimed. (I) also shows hypoglycemic activity.

ADVANTAGE - A stable liquid formulation is provided, which can be stored in the container of a **nebulizer** inhaler (especially in a two- or multi-chamber cartridge of a high pressure atomizer) for several months or even several years without reduction in pharmaceutical quality. The storage formulation can be converted simply and rapidly into an inhalation formulation. (I) has previously only been used in powder form

for inhalative therapy in ambulant patients, due to its usual instability in solution.
Dwg.0/0

L99 ANSWER 27 OF 48 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2000213271 EMBASE
TITLE: [Formoterol Turbuhaler 6 .mu.g vs. Formoterol Aerolizer 12 .mu.g].
FORMOTEROL TURBOHALER 6 .mu.G VS. FORMOTEROL AEROLIZER 12 .mu.G.
AUTHOR: Schlimmer P.
CORPORATE SOURCE: Dr. P. Schlimmer, Medizinische Klinik, SHG-Kliniken, D-66663 Merzig, Germany
SOURCE: Atemwegs- und Lungenkrankheiten, (2000) 26/5 (263-268).
Refs: 24
ISSN: 0341-3055 CODEN: ATLUDF
COUNTRY: Germany
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 015 Chest Diseases, Thoracic Surgery and Tuberculosis
027 Biophysics, Bioengineering and Medical Instrumentation
037 Drug Literature Index
039 Pharmacy
LANGUAGE: German
SUMMARY LANGUAGE: English; German

AB Formoterol, a long lasting bronchodilator with a fast onset of action is available in two different devices, Turbuhaler and Aerolizer. Formoterol Turbuhaler 6 .mu.g contains a small amount of 0,594 .mu.g micronised lactose per dose whereas in the Aerolizer formoterol is combined with 22,5 mg grained lactose. Due to the differences in galenic composition and the properties of the inhalation devices, Turbuhaler deposits at least twice as much of the drug into the airways as compared with Aerolizer. In an open randomized crossover study design it was investigated whether the formoterol dose could be halved by using the Turbuhaler device and still produces a similar outcome regarding onset and duration of action and maximum effect. This was tested by measuring the specific airway conductance (sGAW) in asthmatic patients. After reversibility testing with terbutaline and a run-in period of one week 16 patients suffering from stable moderate to servere asthma were randomized. The patients inhaled a single dose of the different formulations on two different days. After the application of the drug sGAW was measured at different time points for a period of eight hours. No differences between the two types of formoterol inhalation devices were found regarding onset and duration of action, maximum effect and AUC. In conclusion it is possible to obtain a similar clinical effect with Formoterol Turbuhaler 6 .mu.g as with twice the dose in Formoterol Aerolizer 12 .mu.g. Beside the easier way of application Formoterol Turbuhaler 6 .mu.g provides the more economical alternative as well.

CT Medical Descriptors:
*drug delivery system
*asthma: DT, drug therapy
drug formulation
airway conductance
area under the curve
aerosol
drug distribution
treatment outcome
drug efficacy
human
clinical trial

randomized controlled trial
crossover procedure
controlled study
article
Drug Descriptors:
***formoterol: CT, clinical trial**
***formoterol: DT, drug therapy**
***formoterol: IH, inhalational drug administration**

L99 ANSWER 28 OF 48 MEDLINE DUPLICATE 3
ACCESSION NUMBER: 2000213083 MEDLINE
DOCUMENT NUMBER: 20213083 PubMed ID: 10751031
TITLE: Hollow porous particles in metered dose inhalers.
AUTHOR: Dellamary L A; Tarara T E; Smith D J; Woelk C H; Adractas A; Costello M L; Gill H; Weers J G
CORPORATE SOURCE: Alliance Pharmaceutical Corp., San Diego, California 92121, USA.
SOURCE: PHARMACEUTICAL RESEARCH, (2000 Feb) 17 (2) 168-74. Journal code: PHS; 8406521. ISSN: 0724-8741.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200006
ENTRY DATE: Entered STN: 20000616
Last Updated on STN: 20000616
Entered Medline: 20000605

AB PURPOSE: To assess the physical stability and aerosol characteristics of suspensions of hollow porous microspheres (PulmoSpheres) in HFA-134a. METHODS: Cromolyn sodium, albuterol sulfate, and **formoterol** fumarate microspheres were prepared by a spray-drying method. Particle size and morphology were determined via electron microscopy. Particle aggregation and suspension creaming times were assessed visually, and aerosol performance was determined via Andersen cascade impaction and dose uniformity studies. RESULTS: The hollow porous particle morphology allows the propellant to permeate freely within the particles creating a novel form of suspension termed a homodispersion, wherein the dispersed and continuous phases are identical, separated by an insoluble interfacial layer of drug and excipient. Homodispersion formation improves suspension stability by minimizing the difference in density between the particles and the medium, and by reducing attractive forces between particles. The improved physical stability leads to excellent dose uniformity. Excellent aerosolization efficiencies are also observed with PulmoSpheres formulations, with fine particle fractions of about 70%. CONCLUSIONS: The formation of hollow porous particles provides a new formulation technology for stabilizing suspensions of drugs in hydrofluoroalkane propellants with improved physical stability, content uniformity, and aerosolization efficiency.

CT Check Tags: Human; In Vitro
Administration, Inhalation
Aerosols
Albuterol: AD, administration & dosage
Albuterol: PK, pharmacokinetics
*Anti-Asthmatic Agents: AD, administration & dosage
Anti-Asthmatic Agents: PK, pharmacokinetics
*Asthma: DT, drug therapy
Bronchodilator Agents: AD, administration & dosage
Bronchodilator Agents: PK, pharmacokinetics
*Cromolyn Sodium: AD, administration & dosage
Cromolyn Sodium: PK, pharmacokinetics

Ethanolamines: AD, administration & dosage
Ethanolamines: PK, pharmacokinetics
Lung
Microscopy, Electron
Microspheres
***Nebulizers and Vaporizers**
Particle Size
Powders

L99 ANSWER 29 OF 48 WPIDS (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1999-277187 [23] WPIDS
DOC. NO. NON-CPI: N1999-207801
DOC. NO. CPI: C1999-081380
TITLE: Unit for therapeutic liquid **aerosol** delivery to respiratory system.
DERWENT CLASS: B05 B07 P34 Q32
INVENTOR(S): REDMON, M P; WEST, J A
PATENT ASSIGNEE(S): (SEPR-N) SEPRACOR INC
COUNTRY COUNT: 83
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9917754	A1	19990415	(199923)*	EN	24
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW					
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW					
AU 9896879	A	19990427	(199936)		
EP 1021172	A1	20000726	(200037)	EN	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
NO 2000001747	A	20000405	(200039)		
CZ 2000001249	A3	20000816	(200048)		
US 6161536	A	20001219	(200102)		
HU 2000003917	A2	20010328	(200124)		
KR 2001024453	A	20010326	(200161)		
JP 2001518494	W	20011016	(200176)		27
AU 743174	B	20020117	(200219)		
EP 1021172	B1	20020410	(200227)	EN	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
WO 9917754	A1		WO 1998-US21115	19981007
AU 9896879	A		AU 1998-96879	19981007
EP 1021172	A1		EP 1998-950974	19981007
			WO 1998-US21115	19981007
NO 2000001747	A		WO 1998-US21115	19981007
			NO 2000-1747	20000405
CZ 2000001249	A3		WO 1998-US21115	19981007
			CZ 2000-1249	19981007
US 6161536	A	Provisional	US 1997-61363P	19971008
			US 1998-168216	19981007
HU 2000003917	A2		WO 1998-US21115	19981007
			HU 2000-3917	19981007
KR 2001024453	A		KR 2000-703759	20000407

JP 2001518494	W	WO 1998-US21115	19981007
		JP 2000-514626	19981007
AU 743174	B	AU 1998-96879	19981007
EP 1021172	B1	EP 1998-950974	19981007
		WO 1998-US21115	19981007

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9896879	A	Based on	WO 9917754
EP 1021172	A1	Based on	WO 9917754
CZ 2000001249	A3	Based on	WO 9917754
HU 2000003917	A2	Based on	WO 9917754
JP 2001518494	W	Based on	WO 9917754
AU 743174	B	Previous Publ.	AU 9896879
		Based on	WO 9917754
EP 1021172	B1	Based on	WO 9917754

PRIORITY APPLN. INFO: US 1997-61363P 19971008; US 1998-168216 19981007

AB WO 9917754 A UPAB: 20011203

NOVELTY - The unit has a solid state open matrix of a medicament and a **water** soluble or **water** dispersible carrier material contained in a **water** impermeable container.

DETAILED DESCRIPTION - The unit has a solid state open matrix of a medicament and a **water** soluble or **water** dispersible carrier material contained in a **water** impermeable container (16) and sufficient **water** to dissolve the matrix within fifteen seconds, contained in the second **water** impermeable container. The containers can be chambers within one housing. The unit also comprises a metered dose **nebulizer** (4).

USE - In respiratory therapy for topical administration of medication to the mucosal linings of the tracheobronchial tree.

ADVANTAGE - It is not necessary to pre-prepare the **aqueous** solution thus eliminating degradation and the need for low temperature storage.

DESCRIPTION OF DRAWING(S) - The drawing shows

Nebulizer 4

Container 16

Dwg.1/3

L99 ANSWER 30 OF 48 DRUGU COPYRIGHT 2002 THOMSON DERWENTDUPLICATE 4

ACCESSION NUMBER: 1999-40431 DRUGU P S

TITLE: Mass balance and metabolism of 3H-**formoterol** in healthy men after combined i.v. and oral administration-mimicking inhalation.

AUTHOR: Rsenborg J; Larsson P; Tegner K; Hallstrom G

CORPORATE SOURCE: Astra-Zenaca; Univ.Uppsala

LOCATION: Lund; Uppsala, Swed.

SOURCE: Drug Metab.Dispos. (27, No. 10, 1104-16, 1999) 14 Fig. 2 Tab. 21 Ref.

CODEN: DMDSAI ISSN: 0090-9556

AVAIL. OF DOC.: Experimental Medicine, AstraZeneca R&D, S-221 87 Lund, Sweden. (e-mail: johan.rosenborg@astrazeneca.com).

LANGUAGE: English

DOCUMENT TYPE: Journal

FIELD AVAIL.: AB; LA; CT

FILE SEGMENT: Literature

AB Combined p.o. + i.v. doses of the bronchodilator **formoterol**

(FO) given by a scheme simulating the fate of inhaled doses were followed by urinary and a lesser extent of fecal elimination in a study of 6 healthy men. The following metabolites were identified: FG1 and FG2 were glucuronides, FS was FO sulfate, Met1 was O-demethylformoterol, Met1G1 and Met1G2 were glucuronides of Met1, and Met2S was a sulfate of deformylated FO (deformylated FO, i.e., Met2, was not detected). FO, FG1, Met1G2 and FG2 were the major urinary metabolites while FO and Met1 were the major fecal metabolites; most plasma exposure was due to FO, FG1, Met1G2 and FG2. The data were used to propose a metabolic pathway for FO. Side-effects included mild palpitations in 4 subjects, lasting 5-28 min.

CT [01] **FORMOTEROL** *DM; **FORMOTEROL** *AE; PALPITATION *AE; ARRHYTHMIA *AE; CARDIOPATHY *AE; FORMOTERO *RN; P.O. *FT; I.V. *FT; BLOOD-PLASMA *FT; CONC. *FT; HALF-LIFE *FT; TRITIUM-LABELED *FT; METABOLITE *FT; HUMAN *FT; IN-VIVO *FT; ELIMINATION *FT; URINE *FT; FECES *FT; INJECTION *FT; PHARMACOKINETICS *FT; ANTIASTHMATICS *FT; BRONCHODILATORS *FT; SYMPATHOMIMETICS-BETA *FT; DM *FT; AE *FT

RN: **73573-87-2**

L99 ANSWER 31 OF 48 DRUGU COPYRIGHT 2002 THOMSON DERWENT
ACCESSION NUMBER: 1999-38625 DRUGU P
TITLE: Comparative biophysical analysis of the interaction of bronchodilating beta2-adrenoceptor agonists with lipid membranes.
AUTHOR: Ochsner M; Jaekel K; Mutz M; Anderson G P; John E
CORPORATE SOURCE: Univ.Basle; Novartis; Univ.Melbourne
LOCATION: Basle, Switz.; Melbourne, Austr.
SOURCE: Eur.J.Med.Chem. (34, No. 6, 451-62, 1999) 4 Fig. 3 Tab. 59 Ref.
CODEN: EJMCA5 ISSN: 0223-5234
AVAIL. OF DOC.: Biomedical Physics, Faculty of Medicine, University of Basel, Romergrasse 5, VH-4058 Basel, Switzerland.
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature

AB Extensive analysis of the physicochemical properties of salmeterol (SM) and **formoterol** (FO; both Novartis Pharma) in comparison with the short acting beta-2 adrenoceptor agonist salbutamol (SB; Sigma) was carried out and a thorough characterization of drug interaction with lipid membranes was presented. The long-acting relaxant effects of these drugs was explained in terms of their accumulation within plasmalemma lipid bilayers of airway smooth muscle; the delayed response of SM was due to its higher lipophilicity. It was concluded that the drugs, having partitioned into the membrane lipid bilayer remain trapped and available to interact with beta-2 adrenoceptors. For SM, the majority of drug molecules approach the active site(s) of the receptor glycoproteins by lateral diffusion via the plasma membrane and poorly bind to the receptors from the extracellular space.

CT SALBUTAMOL *RC; PARTITION-COEFFICIENT *FT; ART.MEMBRANE *FT; LIPOPHILICITY *FT; ENTHALPY *FT; ENTROPY *FT; ADRENERGIC-RECEPTOR *FT; BETA-2 *FT; MODE-OF-ACT. *FT; IN-VITRO *FT; FLUORESCENCE *FT; ANISOTROPY *FT; LIPID *FT; MEMBRANE *FT; MESANGIAL-CELL *FT; TISSUE-CULTURE *FT; THERMODYNAMICS *FT; RECEPTOR *FT; SUBCELL.STRUCT. *FT

[01] **FORMOTEROL** *OC; **FORMOTEROL** *PH; NOVARTIS *FT; FORMOTERO *RN; ANTIASTHMATICS *FT; BRONCHODILATORS *FT; SYMPATHOMIMETICS-BETA *FT; OC *FT; PH *FT

RN: **73573-87-2**

[02] SALMETEROL *OC; SALMETEROL *PH; NOVARTIS *FT; SALMETERO *RN;

BRONCHODILATORS *FT; ANTIASTHMATICS *FT; SYMPATHOMIMETICS-BETA *FT; OC *FT; PH *FT
RN: 89365-50-4

L99 ANSWER 32 OF 48 MEDLINE
ACCESSION NUMBER: 2000042498 MEDLINE
DOCUMENT NUMBER: 20042498 PubMed ID: 10572207
TITLE: Similar bronchodilation with **formoterol** delivered by aerolizer or turbuhaler.
AUTHOR: Lotvall J; Mellen A; Arvidsson P; Palmqvist M; Radielovic P; Kottakis J; Pfister P
CORPORATE SOURCE: Goteborg University, Sahlgrenska University Hospital, Goteborg, Sweden.. jan.lotvall@mailer.mednet.gu.se
SOURCE: CANADIAN RESPIRATORY JOURNAL, (1999 Sep-Oct) 6 (5) 412-6. Journal code: C1W; 9433332. ISSN: 1198-2241.
PUB. COUNTRY: Canada
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199912
ENTRY DATE: Entered STN: 20000113
Last Updated on STN: 20000113
Entered Medline: 19991214

AB BACKGROUND: In many countries, two dry powder formulations of inhaled **formoterol** are available for clinical use; one uses a single-dose device (Foradil, Aerolizer), and the other uses a multiple-dose device (Oxis, Turbuhaler). OBJECTIVES: To study the bronchodilating effect of **formoterol** 12 mg when delivered via the Aerolizer and Turbuhaler devices over 12 h. STUDY DESIGN: Randomized, double-blind, placebo controlled crossover study. Forced expiratory volume in one second (FEV1) was monitored during a 12 h period. PATIENTS: Nineteen nonsmoking asthma patients were included in the trial on the basis of reversibility of symptoms in response to inhaled salbutamol (either 200 or 400 mg given cumulatively; minimum reversibility 15%). RESULTS: There were no significant differences between the two dry powder devices regarding the change from baseline of FEV1 over 12 h, the area under the curve of FEV1 over 12 h or the maximum value of FEV1. The improvement in FEV1 with **formoterol** 12 mg versus placebo was highly significant for both devices. CONCLUSIONS: **Formoterol** is similarly effective when used as a dry powder when given by either Aerolizer or the Turbuhaler.

CT Check Tags: Female; Human; Male; Support, Non-U.S. Gov't
Administration, Inhalation
Aerosols
*Asthma: DT, drug therapy
*Bronchodilator Agents: AD, administration & dosage
Bronchodilator Agents: TU, therapeutic use
Cross-Over Studies
Double-Blind Method
*Ethanolamines: AD, administration & dosage
Ethanolamines: TU, therapeutic use
Forced Expiratory Volume
Middle Age
***Nebulizers and Vaporizers**
Powders

L99 ANSWER 33 OF 48 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2000022720 EMBASE
TITLE: [High dose corticosteroids in spray in the treatment of

serious bronchial asthma].
CORTICOSTEROIDES NEBULIZADOS EN ALTAS DOSIS EN EL TRATAMIENTO DEL ASMA BRONQUIAL GRAVE.

AUTHOR: Rivera J.M.O.
CORPORATE SOURCE: J.M.O. Rivera, Seccion de Alergologia, Hospital Virgen del Camino-CS, Conde Oliveto, Pamplona, Spain

SOURCE: Alergologia e Inmunologia Clinica, (1999) 14/4 (277-281).
Refs: 12
ISSN: 1575-734X CODEN: AICLF4
COUNTRY: Spain
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 015 Chest Diseases, Thoracic Surgery and Tuberculosis
026 Immunology, Serology and Transplantation
030 Pharmacology
037 Drug Literature Index
LANGUAGE: Spanish

CT Medical Descriptors:
*asthma: DT, drug therapy
*corticosteroid therapy
disease severity
drug indication
drug megadose
bronchodilatation
nebulization
medical nebulizer
combination chemotherapy
drug efficacy
human
male
female
clinical article
clinical trial
controlled study
adult
conference paper
Drug Descriptors:
*corticosteroid: CT, clinical trial
*corticosteroid: AD, drug administration
*corticosteroid: CB, drug combination
*corticosteroid: DO, drug dose
*corticosteroid: DT, drug therapy
*corticosteroid: PD, pharmacology
***corticosteroid: IH, inhalational drug administration**
*corticosteroid: PO, oral drug administration
*budesonide: CT, clinical trial
*budesonide: AD, drug administration
*budesonide: CB, drug combination
*budesonide: DO, drug dose
*budesonide: DT, drug therapy
*budesonide: PD, pharmacology
***budesonide: IH, inhalational drug administration**
*budesonide: PO, oral drug administration
*salbutamol: CT, clinical trial
*salbutamol: CB, drug combination
*salbutamol: DT, drug therapy
*salbutamol: PD, pharmacology
***salbutamol: IH, inhalational drug administration**
theophylline: DT, drug therapy
theophylline: PD, pharmacology
formoterol: DT, drug therapy

formoterol: PD, pharmacology
salmeterol: DT, drug therapy
salmeterol: PD, pharmacology

L99 ANSWER 34 OF 48 MEDLINE
ACCESSION NUMBER: 1999109767 MEDLINE
DOCUMENT NUMBER: 99109767 PubMed ID: 9893769
TITLE: Onset and duration of action of single doses of **formoterol** inhaled via Turbuhaler.
AUTHOR: Ringdal N; Derom E; Wahlin-Boll E; Pauwels R
CORPORATE SOURCE: Medical Department, Fylkessykhuset i Molde, Norway.
SOURCE: RESPIRATORY MEDICINE, (1998 Aug) 92 (8) 1017-21.
Journal code: RME; 8908438. ISSN: 0954-6111.
PUB. COUNTRY: ENGLAND: United Kingdom
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199901
ENTRY DATE: Entered STN: 19990216
Last Updated on STN: 19990216
Entered Medline: 19990129

AB The aim of the study was to investigate the time of onset and the duration of the bronchodilating effect of different doses of **formoterol** administered via Turbuhaler in patients with moderate asthma. Thirty-one patients (five women) with a mean forced expiratory volume in 1 s (FEV1) of 1.97 +/- 0.54 1 and a mean reversibility of 31 +/- 14% of baseline were included in this double-blind, randomized, placebo-controlled and cross-over study. The patients inhaled single doses of placebo, i.e. 6, 12, 24, or 48 micrograms **formoterol** fumarate, on 5 separate days. Serial measurements of specific airways conductance (SGAW) and FEV1 were performed at regular time intervals for 12 h. The majority of the patients had at least a 50% increase in SGAW within 1-4 min after administration of all active treatments. The maximum increase in FEV1 over placebo was dose-dependent: 12% (6 micrograms), 18% (12 micrograms), 19% (24 micrograms), and 26% (48 micrograms) ($P < 0.001$). Twelve hours after administration of 6, 12, 24, and 48 micrograms **formoterol**, the mean increase in FEV1 was still 7%, 15%, 18%, and 27%, respectively, above the value following placebo. Headache was the most frequently reported adverse event in all treatments including placebo. After inhalation of 48 micrograms, three patients experienced mild tremor lasting for less than 1 h; likewise, one patient experienced the same event for 3 h after placebo. **Formoterol** administered via Turbuhaler10 gave a rapid and dose-related bronchodilating effect lasting for 12 h and was well tolerated.

CT Check Tags: Female; Human; Male; Support, Non-U.S. Gov't
Adolescence
*Adrenergic beta-Agonists: AD, administration & dosage
Adrenergic beta-Agonists: PD, pharmacology
Adult
Aged
*Asthma: DT, drug therapy
Asthma: PP, physiopathology
*Bronchodilator Agents: AD, administration & dosage
Bronchodilator Agents: PD, pharmacology
Cross-Over Studies
Dose-Response Relationship, Drug
Double-Blind Method
*Ethanolamines: AD, administration & dosage

Ethanolamines: PD, pharmacology
Forced Expiratory Volume: DE, drug effects
Middle Age
***Nebulizers and Vaporizers**

L99 ANSWER 35 OF 48 MEDLINE
ACCESSION NUMBER: 97457702 MEDLINE
DOCUMENT NUMBER: 97457702 PubMed ID: 9311511
TITLE: Flow-dependent effect of **formoterol** dry-powder inhaled from the Aerolizer.
AUTHOR: Nielsen K G; Skov M; Klug B; Ifversen M; Bisgaard H
CORPORATE SOURCE: Dept of Paediatrics, National University Hospital, Copenhagen, Denmark.
SOURCE: EUROPEAN RESPIRATORY JOURNAL, (1997 Sep) 10 (9) 2105-9. Journal code: ERY; 8803460. ISSN: 0903-1936.
PUB. COUNTRY: Denmark
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199712
ENTRY DATE: Entered STN: 19980109
Last Updated on STN: 19980109
Entered Medline: 19971201

AB The output and size distribution of aerosols from dry powder inhalers are dependent on the flow rate through the device. Therefore, in an in vivo study, we examined the flow-dependency of the effect of **formoterol** when delivered from a dry powder inhaler, the Aerolizer, in a flow range relevant to schoolchildren. In a preliminary study comprising 126 asthmatic children aged 3-10 yrs, the relationship between age and peak inspiratory flow (PIF) rate through the Aerolizer was determined. Mean PIF was 104 L.min-1 and all children aged > 5 yrs performed a PIF > 60 L.min-1. Sixteen children aged 8-15 yrs with exercise-induced asthma (EIA) took part in the main trial comparing the protective effect of 12 micrograms **formoterol** inhaled at 60 and 120 L.min-1. The effect from high and low inspiratory flow was judged from the protective effect against EIA 12 h after drug administration. The decrease in forced expiratory volume in one second (FEV1) after exercise was 34% on the placebo day, but only 15% when **formoterol** was inhaled at the high flow rate. This difference was statistically significant. The decrease in FEV1 was 23% after treatment with **formoterol** inhaled at the low flow rate, that was not significantly different from placebo or from high-flow **formoterol** treatment. These clinical findings correspond with the in vitro findings of flow-dependent fine particle mass from the Aerolizer, and corroborate the relationship between fine particle mass of aerosol and clinical effect. The results indicate a flow-dependent effect of **formoterol** dry powder inhaled from the Aerolizer, within the range of inspiratory flow rate obtainable by school-children. This questions its applicability in children with asthma.

CT Check Tags: Female; Human; Male
Administration, Inhalation
Adolescence
*Asthma, Exercise-Induced: DT, drug therapy
Asthma, Exercise-Induced: PP, physiopathology
*Bronchodilator Agents: AD, administration & dosage
Child
Child, Preschool
Cross-Over Studies
Double-Blind Method

*Ethanolamines: AD, administration & dosage
Forced Expiratory Volume: DE, drug effects
***Nebulizers and Vaporizers**
Powders
Pulmonary Ventilation: DE, drug effects

L99 ANSWER 36 OF 48 DRUGU COPYRIGHT 2002 THOMSON DERWENT
ACCESSION NUMBER: 1997-11601 DRUGU C
TITLE: Enantio- and diastereoselective synthesis of all four stereoisomers of formoterol.
AUTHOR: Hett R; Fang Q K; Gao Y; Hong Y; Butler H T; Nie X; Wald S A
CORPORATE SOURCE: Sepracor
LOCATION: Marlborough, Mass., USA
SOURCE: Tetrahedron Lett. (38, No. 7, 1125-28, 1997) 1 Tab. 15 Ref.
CODEN: TELEAY ISSN: 0040-4039
AVAIL. OF DOC.: Sepracor Inc., 111 Locke Dr., Marlborough, Massachusetts 01752, U.S.A.
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB The 4 stereoisomers of the bronchodilator formoterol (1) were prepared using asymmetric catalytic borane reductions with chiral oxazaborolidines as reducing agents. The procedure involved enantioselective synthesis of the intermediate epoxide (2), utilizing the previously developed enantioselective, cis-1-amino-2-indanol catalysed borane reduction. (R,R)-Formoterol was obtained in good chemical purity containing 2-3% of undesired diastereomer. Crystallization of (R,R)-**formoterol** with L-tartaric acid in **aqueous** isopropanol (85%) finally afforded the pure diastereomer. Likewise, (R,S)-, (S,R)- and (S,S)-formoterol-tartrates were obtained via the same synthetic sequence by reacting the appropriate epoxide with the appropriate amine.
CT [01] FORMOTEROL *OC; FORMOTERO *RN; ANTIASTHMATICS *FT; BRONCHODILATORS *FT; OC *FT; STEREOCHEM. *FT; STEREOISOMER *FT; STEREOSELECTIVE *FT; SYMPATHOMIMETICS-BETA *FT; SYNTH. *FT
RN: 73573-87-2

L99 ANSWER 37 OF 48 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1996:513756 CAPLUS
DOCUMENT NUMBER: 125:151185
TITLE: Pharmaceutical aerosols containing sugars and fluorocarbons or fluorochlorohydrocarbons
INVENTOR(S): Green, Alexander Peter
PATENT ASSIGNEE(S): Glaxo Group Limited, UK
SOURCE: PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9619968	A1	19960704	WO 1995-EP5085	19951222

W: AL, AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR,

NE, SN, TD, TG

AU 9643469	A1	19960719	AU 1996-43469	19951222
EP 799024	A1	19971008	EP 1995-942192	19951222
EP 799024	B1	20000809		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV				
JP 10511376	T2	19981104	JP 1995-520196	19951222
AT 195249	E	20000815	AT 1995-942192	19951222
ES 2150022	T3	20001116	ES 1995-942192	19951222
US 5955439	A	19990921	US 1997-849538	19970624

PRIORITY APPLN. INFO.: GB 1994-26252 A 19941224
WO 1995-EP5085 W 19951222

AB Aerosol formulations for the administration of medicaments by inhalation comprises (a) particulate medicament; (b) at least one sugar; and (c) a fluorocarbon or hydrogen-contg. chlorofluorocarbon propellant. Particulate lactose was dispensed into clean, dry glass bottles and the metering valve was fitted onto the bottles, then micronized fluticasone propionate mixed with 1,1,1,2-tetrafluoroethane was pressure-filled into the canisters through the metering valve. The resultant inhalers delivered 25 .mu.g of fluticasone propionate/actuation.

CT Allergy inhibitors
CT Inflammation inhibitors
CT Soybean
CT Surfactants
CT Carbohydrates and Sugars, biological studies
CT Lecithins
CT Steroids, biological studies
CT **Pharmaceutical dosage forms**
CT Hydrocarbons, biological studies
CT Hydrocarbons, biological studies

L99 ANSWER 38 OF 48 MEDLINE
ACCESSION NUMBER: 97060958 MEDLINE
DOCUMENT NUMBER: 97060958 PubMed ID: 8905004
TITLE: **Formoterol** inhaled as dry powder or via pressurized metered-dose inhaler in a cumulative dose-response study.
AUTHOR: Ullman A; Lofdahl C G; Melander B; Svedmyr N
CORPORATE SOURCE: Department of Clinical Pharmacology, Sahlgrenska Hospital, Goteborg, Sweden.
SOURCE: ALLERGY, (1996 Oct) 51 (10) 745-8.
Journal code: 39C; 7804028. ISSN: 0105-4538.
PUB. COUNTRY: Denmark
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199702
ENTRY DATE: Entered STN: 19970227
Last Updated on STN: 19970227
Entered Medline: 19970212

AB **Formoterol** administered by a dry-powder (DP) capsule inhaler was compared with a pressurized metered-dose inhaler (pMDI) with regard to bronchodilating and systemic effects. The study used a double-blind, crossover, double-dummy technique. Twelve patients with moderate reversible asthma in a stable phase were examined on two separate study days, and the inhalers were given in randomized order. After baseline measurements, increasing doses of **formoterol** were given at intervals of 75 min. FEV1 and heart rate and tremor measurements were

repeated after each dose, and the doses were 12 + 12 + 24 + 48 micrograms, giving a total dose of 96 micrograms. The peak expiratory flow rate (PEFR) was recorded in the morning before the first dose, after the last dose, and then repeatedly at home until 19 h after the last dose. There was an equal increase in ventilatory capacity at each dose level, independent of inhaler device. Repeated PEFR measurements after the last dose did not reveal any differences in duration of effect. There was a slight but statistically significant increase in heart rate and tremor after the highest doses of the DP formulation compared to the pMDI. These systemic effects can probably be explained by the reduced oral deposition of the aerosol caused by using a spacer. This study indicates that the DP and pMDI formulations of **formoterol** are equipotent in bronchodilation.

CT Check Tags: Comparative Study; Human; Male
Administration, Inhalation
Adult
Aged
*Asthma: DT, drug therapy
*Bronchodilator Agents: AD, administration & dosage
Capsules
Cross-Over Studies
Dose-Response Relationship, Drug
Double-Blind Method
*Ethanolamines: AD, administration & dosage
Middle Age
***Nebulizers and Vaporizers**
Peak Expiratory Flow Rate: DE, drug effects
Powders
Therapeutic Equivalency
Time Factors

L99 ANSWER 39 OF 48 DRUGU COPYRIGHT 2002 THOMSON DERWENT
ACCESSION NUMBER: 1996-11772 DRUGU P
TITLE: Pharmacological basis for duration of effect: **Formoterol** and salmeterol versus short-acting beta2-adrenoceptor agonists.
AUTHOR: Linden A; Rabe K F; Lofdahl C G
CORPORATE SOURCE: Univ.Gothenburg
LOCATION: Gothenburg, Swed.; Grosshansdorf, Ger.
SOURCE: Lung (174, No. 1, 1-22, 1996) 12 Fig. 1 Tab. 53 Ref.
CODEN: LUNGD9 ISSN: 0341-2040
AVAIL. OF DOC.: Cardiovascular Research Institute Box 0130, University of California San Francisco, 505 Parnassus Avenue, San Francisco, California, U.S.A.
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature

AB The pharmacology of long-acting versus short-acting beta-2 adrenoceptor agonists is reviewed, with reference to studies on animal and human airways in-vitro and in-vivo. The beta-2 agonists considered include the long-acting **formoterol** and salmeterol, and the short-acting isoprenaline and salbutamol, with clenbuterol as an intermediate case. Lipophilicity appears to be necessary but not sufficient in determining the bronchodilatory duration of action of these compounds, and receptor affinity, selectivity, potency and efficacy may also be involved. It is possible that specific exo-receptors (binding sites other than the adrenoceptor) exist for these compounds, but nonspecific partitioning into the cell membrane, followed by lateral diffusion, is also possible for the very lipophilic salmeterol.

CT IN-VITRO *FT; HUMAN *FT; LAB.ANIMAL *FT; ANTIASTHMATIC *FT; REVIEW *FT
[01] ANTIASTHMATICS *FT; MAIN-TOPIC *FT; PH *FT
[02] **FORMOTEROL** *PH; SALBUTAMOL *PH; SALMETEROL *PH; ISOPRENALINE *PH; PH *FT

L99 ANSWER 40 OF 48 DRUGU COPYRIGHT 2002 THOMSON DERWENT
ACCESSION NUMBER: 1995-23881 DRUGU P T
TITLE: Salmeterol.
AUTHOR: Johnson M
CORPORATE SOURCE: Glaxo
LOCATION: Uxbridge, U.K.
SOURCE: Med.Res.Rev. (15, No. 3, 225-57, 1995) 17 Fig. 8 Tab. 122 Ref.
CODEN: MRREDD ISSN: 0198-6325
AVAIL. OF DOC.: Glaxo Research and Development Ltd., Uxbridge, Middlesex, UB11 1BT, England.
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB Salmeterol is reviewed with reference to the molecule and its interaction with the beta-adrenoceptor, its pharmacology, including affinity and efficacy, involvement of intracellular mediators, onset and duration of action, enantiomers and beta-receptor desensitization. Bronchodilator and nonbronchodilator effects are also discussed. Finally clinical experience is presented. Representative beta-adrenoceptor agonists include adrenaline, isoprenaline, orciprenaline, terbutaline, salbutamol, pributerol, fenoterol, clenbuterol, proctaerol, quinprenaline and **formoterol**.
CT REVIEW *FT; STRUCT.ACT. *FT; ADRENERGIC-RECEPTOR *FT; BRONCHODILATOR *FT; CLIN.TRIAL *FT; RECEPTOR *FT
[01] SALMETEROL *TR; SALMETERO *RN; MAIN-TOPIC *FT; MODE-OF-ACT. *FT; BRONCHODILATORS *FT; ANTIASTHMATICS *FT; SYMPATHOMIMETICS-BETA *FT; 89365-50-4 *FT; TR *FT; PH *FT
RN: 89365-50-4
[02] ADRENALINE *PH; ISOPRENALINE *PH; ORCIPRENALINE *PH; TERBUTALINE *PH; SALBUTAMOL *PH; PRIBUTEROL *PH; FENOTEROL *PH; CLENBUTEROL *PH; PROCTAEROL *PH; QUINPRENALINE *PH; **FORMOTEROL** *PH; PH *FT

L99 ANSWER 41 OF 48 MEDLINE
ACCESSION NUMBER: 94174131 MEDLINE
DOCUMENT NUMBER: 94174131 PubMed ID: 7907426
TITLE: [The effect of a single dose of **formoterol** using an aerosol inhaler in asthmatic children. A randomized, controlled, double-blind study].
Effet d'une dose unique de **formoterol** par voie d'aerosol-doseur chez l'enfant asthmatique. Une etude randomisee, controllee, en double aveugle.
AUTHOR: Lebecque P; Vliers S; De Saint-Moulin T; Godding V
CORPORATE SOURCE: Pneumologie Pediatrique, Cliniques St-Luc, Universite Catholique de Louvain, Bruxelles, Belgique.
SOURCE: REVUE DES MALADIES RESPIRATOIRES, (1994) 11 (1) 47-50. Journal code: RZ9; 8408032. ISSN: 0761-8425.
PUB. COUNTRY: France
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: French
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199404

ENTRY DATE: Entered STN: 19940420
Last Updated on STN: 19970203
Entered Medline: 19940414

AB The duration of action of inhaled **formoterol**, a new long-acting beta-2-agonist, was compared to inhaled salbutamol and placebo in a double-blind, randomized, cross-over study in 16 children (8-12 years old) with stable moderate to serve asthma. Mean baseline FEV1 was 68 +/- 8% predicted. On the 4 study days, baseline FEV1 was within 15% of the FEV1 on visit 1. Two-three days apart, each patient inhaled either placebo, salbutamol (200 micrograms) **formoterol** (12 or 24 micrograms). FEV1 and PEF were measured repeatedly during 8 and 12 hours respectively. After **formoterol**, improvement over placebo remained significant at 8 hours for FEV1 (p = 0.006) and 12 hours for PEF (p = 0.01). When compared to salbutamol, it was significant at 8 hours for PEF (p = 0.03). There were no significant differences in lung function when comparing the 12 micrograms and 24 micrograms doses of **formoterol**. Side-effects were minimal.

CT Check Tags: Female; Human; Male
Adrenergic beta-Agonists: AD, administration & dosage
Adrenergic beta-Agonists: AE, adverse effects
*Adrenergic beta-Agonists: TU, therapeutic use
Aerosols
Albuterol: AD, administration & dosage
Albuterol: AE, adverse effects
Albuterol: TU, therapeutic use
*Asthma: DT, drug therapy
Bronchodilator Agents: AD, administration & dosage
Bronchodilator Agents: AE, adverse effects
*Bronchodilator Agents: TU, therapeutic use
Child
Double-Blind Method
Drug Tolerance
Ethanolamines: AD, administration & dosage
Ethanolamines: AE, adverse effects
*Ethanolamines: TU, therapeutic use
Forced Expiratory Volume: DE, drug effects
Nebulizers and Vaporizers
Peak Expiratory Flow Rate: DE, drug effects
Placebos
Time Factors

L99 ANSWER 42 OF 48 DRUGU COPYRIGHT 2002 THOMSON DERWENT
ACCESSION NUMBER: 1993-30909 DRUGU P
TITLE: The Pharmacology of Salmeterol.
AUTHOR: Johnson M; Butchers P R; Coleman R A; Nials A T; Strong P; Sumner M J
CORPORATE SOURCE: Glaxo
LOCATION: Ware, United Kingdom
SOURCE: Life Sci. (52, No. 26, 2131-43, 1993) 7 Fig. 4 Tab. 45 Ref.
CODEN: LIFSAK ISSN: 0024-3205
AVAIL. OF DOC.: Department of Cardiovascular and Respiratory Pharmacology, Glaxo Group Research Ltd., Ware, Hertfordshire, England. (8 authors).
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature

AB The pharmacology of salmeterol (SA) is reviewed. Other drugs discussed include salbutamol, isoprenaline, **formoterol**, propranolol and sotalol. Due to its potent and prolonged activation of beta-2

adrenoceptors in airway smooth muscle cells, endothelial cells, mast cells and epithelial cells, SA induces prolonged bronchodilatation, reduced vascular permeability, inhibition of inflammatory mediators, stimulation of ciliary function and modulation of ion and **water** transport across the bronchial mucosa. (congress).

CT HUMAN *FT; GUINEA-PIG *FT; IN-VITRO *FT; AIRWAY *FT; TRACHEA *FT; LUNG *FT; REVIEW *FT; BRONCHODILATOR *FT; RESPIRAT.TRACT *FT; SYMPATHOMIMETIC-BETA *FT; LAB.ANIMAL *FT

[01] SALMETEROL *PH; SALMETERO *RN; MAIN-TOPIC *FT; BRONCHODILATORS *FT; ANTIASTHMATICS *FT; SYMPATHOMIMETICS-BETA *FT; PH *FT

RN: 89365-50-4

[02] INFLAMMATION *OC; SALBUTAMOL *PH; ISOPRENALINE *PH; **FORMOTEROL** *PH; PROPRANOLOL *PH; SOTALOL *PH; FENOTEROL *PH; ICI-118551 *PH; KETOTIFEN *PH; THEOPHYLLINE *PH; CROMOLYN *PH; SALMETEROL *PH; ANTIINFLAMMATORY *FT; CYCLIC-AMP *FT; HISTAMINE *FT; LEUKOTRIENE-C *FT; LEUKOTRIENE-D4 *FT; PH *FT

L99 ANSWER 43 OF 48 DRUGU COPYRIGHT 2002 THOMSON DERWENT
ACCESSION NUMBER: 1994-09553 DRUGU P
TITLE: Comparative Biophysical Analysis of Interactions Between **Formoterol**, Salbutamol or Salmeterol and Lipid Membranes.
AUTHOR: Jackel K; John E; Anderson G P
CORPORATE SOURCE: CIBA-Geigy
LOCATION: Basle, Switzerland
SOURCE: Eur.Resp.J. (6, Suppl. 17, 383S, 1993) 1 Tab. 2 Ref.
AVAIL. OF DOC.: Physics and Asthma Departments, Ciba-Geigy AG, 4002 Basel, Switzerland.
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature

AB **Formoterol** and salmeterol, but not salbutamol partitioned into synthetic lipid membranes in an in-vitro study. Synthetic membranes were composed of palmityl oleolylphosphotidylcholine and dioleolylphosphotidylserine. The results raise the possibility that transitory retention of **formoterol** and salmeterol in the lipid plasmalemma bilayer may determine duration of action after inhalation in-vivo. The apparent discrepancy between the 30-fold higher membrane affinity (log Kpmem) of salmeterol compared to **formoterol** and their similar clinical duration of action in humans remains to be explained. (congress abstract).

CT IN-VITRO *FT; MEMBRANE *FT; PERMEABILITY *FT; MODE-OF-ACT. *FT; BRONCHODILATOR *FT; LIPOPHILICITY *FT; PHYS.CHEM. *FT; DRUG-COMPARISON *FT; SUBCELL.STRUCT. *FT

[01] SALBUTAMOL *PH; SALBUTAMO *RN; ANTIASTHMATICS *FT; BRONCHODILATORS *FT; SYMPATHOMIMETICS-BETA *FT; TOCOLYTICS *FT; PH *FT

RN: 18559-94-9

[02] SALMETEROL *PH; SALMETERO *RN; BRONCHODILATORS *FT; ANTIASTHMATICS *FT; SYMPATHOMIMETICS-BETA *FT; PH *FT

RN: 89365-50-4

[03] **FORMOTEROL** *PH; FORMOTERO *RN; ANTIASTHMATICS *FT; BRONCHODILATORS *FT; SYMPATHOMIMETICS-BETA *FT; PH *FT

RN: **73573-87-2**

L99 ANSWER 44 OF 48 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1991:589788 CAPLUS
DOCUMENT NUMBER: 115:189788
TITLE: Hydrofluorocarbon propellants for pharmaceutical aerosols

INVENTOR(S): Steele, Gerald; Somani, Asit; Lim, Joseph Geok Paan
PATENT ASSIGNEE(S): Fisons PLC, UK
SOURCE: PCT Int. Appl., 18 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9111173	A1	19910808	WO 1991-GB133	19910130
W: CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
IL 97065	A1	19940125	IL 1991-97065	19910128
CA 2074495	AA	19910803	CA 1991-2074495	19910130
ZA 9100696	A	19911030	ZA 1991-696	19910130
EP 513127	A1	19921119	EP 1991-903548	19910130
EP 513127	B1	19950719		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
JP 05503523	T2	19930610	JP 1991-503797	19910130
JP 2858948	B2	19990217		
ES 2075956	T3	19951016	ES 1991-903548	19910130

PRIORITY APPLN. INFO.: GB 1990-2351 A 19900202
GB 1990-23655 A 19901031
GB 1990-26476 A 19901205
WO 1991-GB133 W 19910130

AB A pressurized aerosol compn. comprises a liquefied hydrofluorocarbon propellant contg. substantially no nonhydrofluorocarbon solvent having dispersed therein a medicament and a fluorinated surfactant. The propellants are substantially taste- and odor-free and have suitable vapor pressures for the administration of medicaments by inhalation, yet are environmentally safe and acceptable. Thus, a compn. contg. nedocromil Na 0.200, FC 431 (fluorinated acrylic polymer) 0.061, and CF3CFH2 11.979 g was filled into Al aerosol canister.

CT Bronchodilators
CT **Pharmaceutical dosage forms**
CT Hydrocarbons, biological studies

L99 ANSWER 45 OF 48 MEDLINE
ACCESSION NUMBER: 91243435 MEDLINE
DOCUMENT NUMBER: 91243435 PubMed ID: 2036817
TITLE: The effect of maximal doses of **formoterol** and salbutamol from a metered dose inhaler on pulse rates, ECG, and serum potassium concentrations.
AUTHOR: Maesen F P; Costongs R; Smeets J J; Brombacher P J; Zweers P G
CORPORATE SOURCE: Department of Respiratory Diseases, De Wever Hospital, Heerlen, The Netherlands.
SOURCE: CHEST, (1991 Jun) 99 (6) 1367-73.
Journal code: D1C; 0231335. ISSN: 0012-3692.
PUB. COUNTRY: United States
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199107
ENTRY DATE: Entered STN: 19910719
Last Updated on STN: 19970203

Entered Medline: 19910703

AB In a randomized, double-blind, crossover cumulative study, the individual maximal bronchodilator dosages for **formoterol** (F) and salbutamol (S) were assessed for their respective influence on ECG, pulse rate, and serum potassium levels in 13 patients with stable and reversible asthma. The following dosages were administered with an interval of 1 h: 12-24-48-(48)-(48) micrograms for F and 100-200-400-400-(400)-(400) micrograms for S. The study day was discontinued if pulse rate was above 140 beats min-1, a flattening of T wave on the ECG was recorded, or a maximal bronchodilation in FEV1 was observed (above 110 percent of the predicted value or an increase in FEV1 in the last two measurements below 5 percent). The maximal individual dose of F administered was 84 micrograms in six patients, 132 micrograms in three patients, 180 micrograms in three patients, and 228 micrograms in one patient. For S, the maximal individual dose was 400 micrograms in three patients, 2,200 micrograms in eight patients, 3,000 micrograms in one patient, and 3,800 micrograms in one patient. The mean maximal increase in FEV1 was 36.0 percent after F and 35.1 percent after S. Pulse rate increased from 73 to S3 beats.min-1 after F and from 75 to 84 beats.min-1 after S (both statistically significant). No pulse rate above 140 beats.min-1 was observed. In the high-therapeutic range (up to 36 micrograms of F and 6,090 micrograms of S), no changes in potassium level were observed. In still higher dosages, mean potassium level decreased from 4.16 to 3.78 mmol.L-1 after F and from 4.02 to 3.88 mmol.L-1 after S (not clinically relevant). The lowest individual potassium level recorded was 3.1 mmol.L-1. No clinically important changes in ECG were observed. In conclusion, very high doses of F and S administered from a metered dose inhaler proved to be safe for patients.

CT Check Tags: Comparative Study; Female; Human; Male
*Albuterol: AD, administration & dosage
Albuterol: PD, pharmacology
Albuterol: TU, therapeutic use
Asthma: BL, blood
Asthma: DT, drug therapy
Asthma: PP, physiopathology
*Bronchodilator Agents: AD, administration & dosage
Bronchodilator Agents: PD, pharmacology
Bronchodilator Agents: TU, therapeutic use
Double-Blind Method
*Electrocardiography: DE, drug effects
*Ethanolamines: AD, administration & dosage
Ethanolamines: PD, pharmacology
Ethanolamines: TU, therapeutic use
Forced Expiratory Volume: DE, drug effects
Middle Age
***Nebulizers and Vaporizers**
*Potassium: BL, blood
Pulmonary Ventilation: DE, drug effects
*Pulse: DE, drug effects

L99 ANSWER 46 OF 48 DRUGU COPYRIGHT 2002 THOMSON DERWENT
ACCESSION NUMBER: 1991-29154 DRUGU T
TITLE: 'Fog'-Induced Bronchospasm and Neutrophil Chemotactic Activity: Effect of Inhaled **Formoterol**.
AUTHOR: Zanotti E; Crotti P; Moscato G; Patruno V; Dellabianca A; Rampulla C
LOCATION: Pavia, Italy
SOURCE: Am.Rev.Respir.Dis. (143, No. 4, Pt. 2, A650, 1991) 2 Tab.
CODEN: ARDSBL ISSN: 0003-0805
AVAIL. OF DOC.: Clinica del Lavoro Foundation, Centro Medico di Montescano,

Pavia, Italy.
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB In a double-blind study, 12 asthmatics (fog responders) were randomized to receive a single inhaled dose of **formoterol** (F), salbutamol (S), or placebo (P). Fog challenge (inhalation of ultrasonically nebulized distilled **water**) was performed after dosing. Lung function and neutrophil chemotactic activity (NCA) were also assessed. Only F was effective in preventing 'fog'-induced bronchospasm and release of NCA 6 hr after administration. (congress abstract).
CT ASTHMA *TR; PNEUMOPATHY *TR; IN-VIVO *FT; CASES *FT; DOUBLE *FT; BLIND-TEST *FT; PLACEBO *FT; RANDOM *FT; INHALATION *FT; CLIN.TRIAL *FT; ANTIASTHMATIC *FT; LUNG *FT; FUNCTION *FT; RESPIRATION *FT; DRUG-COMPARISON *FT; BRONCHODILATOR *FT; NEUTROPHIL *FT; CHEMOTAXIS *FT; LEUKOCYTE *FT
[01] **FORMOTEROL** *TR; ANTIASTHMATICS *FT; BRONCHODILATORS *FT; SYMPATHOMIMETICS-BETA *FT; FORMOTERO *RN; TR *FT
RN: **73573-87-2**
[02] SALBUTAMOL *TR; ANTIASTHMATICS *FT; BRONCHODILATORS *FT; SYMPATHOMIMETICS-BETA *FT; TOCOLYTICS *FT; SALBUTAMO *RN; TR *FT
RN: 18559-94-9

L99 ANSWER 47 OF 48 DRUGU COPYRIGHT 2002 THOMSON DERWENT
ACCESSION NUMBER: 1991-15484 DRUGU P T
TITLE: Effect of Inhaled **Formoterol** on ''Fog''-Induced Bronchospasm: A Double-Blind, Three-Period Cross-Over Study.
AUTHOR: Zanotti E; Crotti P; Moscato G; Dellabianca A; Rampulla C
LOCATION: Pavia, Italy
SOURCE: Eur.Resp.J. (3, Suppl. 10, 133S-134S, 1990) ISSN: 0903-1936
AVAIL. OF DOC.: Clinica del Lavoro Foundation, Montescano, Pavia, Italy.
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature
AB The efficacy and tolerability of single inhaled doses of **formoterol** (F), salbutamol (S) and placebo (P) in preventing ultrasonically nebulized distilled **water** (i.e.''fog'')-induced bronchospasm were compared in 12 asthmatic patients enrolled in a double-blind, within-patient, 3-period crossover study. It was found that only F was still effective in protecting against fog-induced asthma 6 hr after administration. (congress abstract).
CT ASTHMA *TR; PNEUMOPATHY *TR; BRONCHOSPASM *OC; PNEUMOPATHY *OC; **WATER** *RC; CASES *FT; IN-VIVO *FT; DRUG-COMPARISON *FT; PLACEBO *FT; DOUBLE *FT; BLIND-TEST *FT; CROSSOVER *FT; PROPHYLAXIS *FT; INDUCED *FT; ANTIASTHMATIC *FT
[01] **FORMOTEROL** *PH; **FORMOTEROL** *TR; ANTIASTHMATICS *FT; BRONCHODILATORS *FT; SYMPATHOMIMETICS-BETA *FT; FORMOTERO *RN; PH *FT; TR *FT
[02] SALBUTAMOL *PH; SALBUTAMOL *TR; ANTIASTHMATICS *FT; BRONCHODILATORS *FT; SYMPATHOMIMETICS-BETA *FT; TOCOLYTICS *FT; SALBUTAMO *RN; PH *FT; TR *FT

L99 ANSWER 48 OF 48 DRUGU COPYRIGHT 2002 THOMSON DERWENT
ACCESSION NUMBER: 1984-08645 DRUGU P A
TITLE: The Development of a Radioimmunoassay for **Formoterol**
AUTHOR: Yokoi K; Murase K; Shiobara Y

CORPORATE SOURCE: Yamanouchi
LOCATION: Tokyo, Japan
SOURCE: Life Sci. (33, No. 17, 1665-72, 1983) 7 Fig. 8 Ref.
CODEN: LIFSAK ISSN: 0024-3205
AVAIL. OF DOC.: Institute of Research and Development, Yamanouchi Pharmaceutical Co. Ltd., Azusawa 1-1-8, Itabashi-ku, Tokyo, Japan.
LANGUAGE: English
DOCUMENT TYPE: Journal
FIELD AVAIL.: AB; LA; CT; MPC
FILE SEGMENT: Literature

AB An RIA for **formoterol** was developed. Its sensitivity was 0.1 ng/ml in plasma and urine and cross reactivity with glucuronide was 30%. Results compared favorably with those obtained by GS-MS. Plasma and urine **formoterol** levels were determined following p.o. administration of the fumarate to dogs and humans.

[01] **FORMOTEROL** *DM; **FORMOTEROL** *OC; FUMARATE *DM; FUMARATE *OC; P.O. *FT; DOG *FT; HUMAN *FT; URINE *FT; CONC. *FT; RADIOIMMUNODET. *FT; QUANT. *FT; DET. *FT; BLOOD-PLASMA *FT; ANTIASTHMATICS *FT; BRONCHODILATORS *FT; SYMPATHOMIMETICS *FT; LAB.ANIMAL *FT; ANALYSIS *FT; SEROLOGY *FT; FORMOTERO *RN; DM *FT; OC *FT